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The Influence Of Mentoring Relationship Quality And Satisfaction On Novice Teachers' Self-Efficacy

Matar Ahmed Alessa

THE INFLUENCE OF MENTORING RELATIONSHIP QUALITY AND SATISFACTION ON NOVICE TEACHERS' SELF-EFFICACY

by

Matar Ahmed Alessa
Bachelor of Science Education, Umm Al-Qura University, 2007
Master of Curriculum and Instruction, University of Colorado at Colorado Springs, 2013

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This dissertation, submitted by Matar Ahmed Alessa in partial fulfillment of the requirements for the Degree of Doctor of Philosophy from the University of North Dakota, has been read by the Faculty Advisory Committee under whom the work has been done and is hereby approved.

Dr. Jodi Bergland Holen, (Chairperson)

Dr. Gail Ingwalson

Dr. Anne Walker

Dr. Jesse Rhoades

This dissertation is being submitted the appointed advisory committee as having met all the requirements of the School of Graduate Studies at the University of North Dakota and is hereby approved.

Dr. Grant McGimpsey
Dean of the School of Graduate Studies

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Date

PERMISSION

Title	The Influence of Mentoring Relationship Quality and Satisfaction on Novice Teachers' Self-Efficacy
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إلى أبي العزيز أحمد وأمي العزيزة الجوهرة، إلى زوجتي الحبيبة حنين، إلى أبنائي الأعزاء أحمد وأمين، إلى بناتي الغاليات ليندا ولينا، إلى اخواني واخواتي، إلى أصدقائي الأوفياء

ABSTRACT

This study examined the influence of mentoring relationship quality, mentoring satisfaction, and mentor matches on novice teachers' self-efficacy. Additionally, the study continued to explore a Midwestern State's mentoring program features, novice teachers' needs, and challenges of working conditions. The study surveyed 340 novice teachers, with a returning rate of 43.5% (N =148), including 10 participants who provided partial responses. Participants were assigned from different grade levels and school demographics. The study found statistical correlation between mentoring relationship quality and novice teachers' self-efficacy. Also, mentor matches by school, content, and grade levels did not show a statistical influence on mentoring relationship quality, satisfaction, and novice teachers' self-efficacy. Novice teachers seemed to favor their assigned mentors from the same school, content, and grade levels, and rated their relationship and satisfaction slightly higher than those who did not get matched. The study found that assigned mentors from different school or grade levels had slightly higher self-efficacy.

The study found that the most important mentoring program features were the assigned mentors, frequent meetings, and observations. These findings ensured the potential influence of mentors to guide novice teachers. Also, the study findings of challenging working conditions were related to student diversity, school climate and resources, parents' involvement, and workload.

CHAPTER I

INTRODUCTION

The first year of teaching is critical for novice teachers because it coincides with teaching challenges and the need for continued learning practices to teach (Feiman-Nemser, 2001). These challenges require more attention for supporting induction programs that help and guide novice teachers to succeed in their early career. The types of induction programs have various impacts on novice-teacher learning outcomes. Furthermore, mentoring programs have become a primary type of induction programs that interest educators (Carver & Feiman-Nemser, 2009). These programs are unique and different from typical induction programs such as orientation, workshops, performance-improvement programs, and peer observations (Moir, Barlin, Gless, & Miles, 2009). The movement behind mentoring programs is related to the need of increasing teachers' retention (Feiman-Nemser, 2003; Ingersoll & Strong, 2011; Smith & Ingersoll, 2004), and teacher quality (Wang & Odell, 2002). Ingersoll and Strong (2011) indicated that "mentoring is the personal guidance provided, usually by seasoned veterans, to beginning teachers in schools" (p. 203). Mentors can provide various kinds of assistance such as planning for instruction, dealing with classroom issues, and understanding school policies and requirements (Moir et al., 2009).

While teacher-preparation programs have various approaches based on the differences of institutions nationwide, teacher training and preparation during their time

at universities is not enough to assist teacher candidates in acquiring all the needed instructional skills to teach at a high level (Darling-Hammond & Baratz-Snowden, 2007; Womack-Wynne et al., 2011). Novice teachers need careful assistance to thrive in their early careers and help them improve their qualifications. They need to build their perceived efficacy, which helps them reflect on their work development. Bandura (1997) indicated that "self-efficacy beliefs operate as a key factor in a generative system of human competence" (p. 37). Because self-efficacy can control individuals' performance (Bandura), potential attention should focus on how educators should use the mentoring programs' outcomes to improve novice teachers' self-efficacy.

Context

As a teacher educator, working on teacher improvement and quality is a critical part of my research and future work duties. Throughout my work as a mentor for student teachers in Saudi Arabia, I noted significant pedagogical problems. I observed student teachers struggling with their classroom management and teaching practices, which led me to wonder what would happen to them once they graduated and got employed in schools. Would they be successful or would they still encounter some problematic aspects of teaching such as establishing an active learning environment, dealing with time management, promoting students' interaction, enhancing students' disciplines, and even demonstrating content knowledge? This led me to think about the appropriate kinds of support needed for those novice teachers, especially as in Saudi Arabia there is no specific continued training for novice teachers when they are hired in schools. This makes mentoring opportunities a fascinating topic for me to work on in the future. Conducting such research can help broaden my understanding of how mentoring

programs influence novice teachers' self-efficacy development, which could later contribute to the larger picture of Saudi educational development.

I believe that classrooms are filled with both challenges and opportunities for teachers. Classroom challenges concern various issues that can arise in the learning environment, including content mastery, interactions, assessments, and students' learning progress. Helping students to be in an active learning environment requires more prepared and qualified teachers. These challenges can further complicate teachers' retention to stay in the classroom and thrive. For example, Perrachione, Rosser, and Petersen (2008) found that "personal teaching efficacy, working with students, [and] job satisfaction" were important factors for teachers to stay in the teaching profession (p. 35). This requires more focus on how to support those novice teachers to thrive by providing them with the appropriate support they need. However, classrooms also can offer learning and developmental opportunities, which require further guidance to support struggling teachers to learn, thrive, and lead in their classrooms and the teaching profession. This has led me to focus on two distinct areas of supporting and improving teachers' quality: mentoring programs that are designed to retain qualified teachers, and self-efficacy as an indication of confident and effective teachers. Focusing on teachers' development can take various forms, but these specific areas are more critical aspects of teacher improvement that I am fascinated to discover.

With the announcement of Saudi Vision 2030, the government shifted the focus from petroleum demand to "the overall development in education, industry, health care, social services, and investment" (Saudi Ambassador to Sudan, 2016, para 7). In terms of educational improvement, ensuring teacher quality and effectiveness can contribute to

attaining the vision objectives to compete with others and direct the kingdom's economic demand for renewable resources and non-petroleum investments. Saudi teachers require further support to increase their educational performance, which could have a significant impact on the kingdom's transition to Saudi Vision 2030. Therefore, more of a focus on educational policies is important, including teacher preparation and development. I see a significant future in focusing on mentoring programs, teacher self-efficacy, and teacher improvement as some of the primary aspects of retaining qualified teachers. Exploring the areas of teacher training and development can increase educators' attention to providing newly hired teachers with the appropriate assistance. This research can be transferred to contribute to the demand for qualified teachers and help attain the Saudi Vision 2030. Focusing on the United States' experience of constructing and implementing mentoring programs with a focus on well-constructed programs can be helpful. This can be adapted to improve Saudi teachers' effectiveness and proactivity to deal with challenging classrooms and educational goals that focus on the future of Saudi Vision 2030.

Purpose of the Study

Related to the significant variations of implementation and emphasis of mentoring programs, this study focused on the mentoring relationship quality and satisfaction in terms of the mentoring process's impacts on novice teachers' self-efficacy in a Midwestern State mentoring program. This mixed method study, with a primarily quantitative function, had four components. The first component was to examine the relationship between mentoring relationship quality and novice teachers' self-efficacy, operationalized as a continuous variable to measure the impact of mentoring relationship

quality on self-efficacy beliefs as perceived by novice teachers. Related to the variation of mentoring programs across the United States, mentoring quality becomes crucial for further investigation. In this study, the mentoring quality was operationalized by the significance of the mentor–mentee relationship and communication based on mentees' perceptions.

The second component of this study was to examine the impact of mentoring satisfaction on novice teachers' self-efficacy. Even though studies have documented positive impacts of mentoring programs on mentees, there is a lack of studies that examine mentees' satisfaction with their mentoring process. Since the development of mentoring programs, there has been no focus on exploring novice teachers' attitudes and satisfaction toward mentoring implementation and development. Two exceptional studies examined mentees' satisfaction with their mentoring program in different occupations other than K-12 education. The first study (Ragins, Cotton, & Miller, 2000) examined the level of satisfaction among employees in three professions, including journalism, sociology, and engineering. The second study (Xu & Payne, 2014) focused on faculty in higher education. Also, other studies have focused on mentoring's impact on job satisfaction as intended outcomes (Ingersoll & Strong, 2011; Williams, 2012), but there is a need to investigate novice teachers' satisfaction in relation to the mentoring program because mentoring satisfaction can contribute to the effectiveness of the mentorship process to attain novice teachers' needs.

The third component was to examine the influence of mentor matches on novice teachers' self-efficacy. These matches included mentor's existence in the same school, teaching the same grade level, and teaching the same content areas of disciplines.

Mentor–mentee matches may play a role in improving mentoring effectiveness. Less than half of novice teachers have mentors teaching in the same discipline (Kardos & Johnson, 2010). Furthermore, this study also sought to examine mentor matches in relation to mentoring quality and satisfaction.

The fourth component contained overriding qualitative questions to provide further understanding of mentoring program features and effectiveness to fulfill novice teachers' needs. These questions were significantly important to explore and deepen the understanding of various aspects of the mentoring program.

Significance

The importance of this study stems from the need to understand the influence of mentoring programs on novice teachers in ways that are critically related to the mentoring programs' characteristics and quality. Novice teachers' perceptions on how a mentoring program can shape their teaching and learning skills are crucial. Specific exploration of mentoring relationship quality and novice teachers' satisfaction with their mentoring process can offer potential direction for aiming focus on supporting those novices. Mentoring programs across the United States significantly vary based on their contexts, contents, policies, aims, and implementation, which increase the issues of understanding their specific impacts on novice teachers. The current study helps teacher educators and mentoring program specialists and coordinators to understand the impacts of mentoring relationship quality, satisfaction, and mentor selection on novice teachers' self-efficacy. In addition, it is hoped that the study reinforces educators' understandings of how these programs can direct novice teachers' self-efficacy to continue their professional growth and to ready them for challenging classrooms. The benefits for

participants are related to sharing their voices on how their mentoring program can help them grow their professional efficacy. This can help educators and mentoring specialists to focus on how to articulate the content and implementation of a mentoring program. Also, the study was designed to seek further explanation through open-ended questions to understand some of the key aspects of mentoring relationship quality and support.

Research Questions

Quantitative Questions

This study consisted of three overriding main questions:

1. What is the relationship between mentoring relationship quality based on mentor-mentee relationship and novice teachers' self-efficacy?
2. What is the relationship between mentoring satisfaction and novice teachers' self-efficacy?
3. In what ways do mentor matches make a difference in terms of mentoring relationship quality, satisfaction, and novice teachers' self-efficacy?

Qualitative Survey Questions

The following narrative questions were incorporated into the survey to provide extended understanding of the mentoring features, support, and challenges of working conditions that novice teachers may encounter.

1. Please describe the most valuable features of the mentoring program. Why?
2. Overall, does your mentoring program meet your needs as a growing professional? Why or Why not?
3. At your site, what are the most challenging working conditions? Please be specific.

Research Framework

The research framework for this study design assumes that mentoring relationship quality and satisfaction, along with mentor matches, are influencing factors on novice teachers' self-efficacy. Because mentoring elements, characteristics, and implementation impact mentoring influence on novice teachers in various ways, it is critical to analyze the effectiveness of the mentoring program that is operationalized by these variables: the impact of mentoring relationship, satisfaction, and mentor matches (e.g., matches by teaching/working in the same school, teaching the same content, and teaching the same grade levels) on their self-efficacy beliefs.

Analyzing the impact of mentoring relationship quality on novice teachers' self-efficacy has complex aspects. Kram (1985) proposed that "the most essential characteristics of a developmental relationship are found by noting the mentoring functions that the relationship provides. […] Through role modeling …. [a novice] develops a sense of competence, confidence, and effectiveness" (p. 47). Kram also emphasized that individuals' needs can contribute to shape and strengthen their relationships when they feel that they receive appropriate support. Thus, it is important to explore the impact of this relationship quality on self-efficacy since novice teachers need to seek help and assistance based on their teaching contexts and establish their sense of their capability.

Satisfaction of the mentee is a significant indicator of mentoring benefits (Xu & Payne, 2014). While the level of satisfaction impacts individuals' motivation (Thierry, 1998), Bandura (1997) indicated that highly motivated individuals tend to have great confidence, which would promote their performance and efficacy. Xu and Payne (2014)

identified several implications concerning the importance of mentorship satisfaction in the organizational milieu, including (a) a significant connection to job attitudes, (b) a prediction of healthy outcomes and effective mentorship process, and (c) a strong relationship between mentors and mentees. Examining the relationship between novice teachers' mentoring satisfaction and their self-efficacy is crucial to ensure that not only novice teachers' needs have been met, but also satisfaction is an indicator of their self-efficacy and beliefs about their capabilities to teach effectively and succeed in the teaching profession.

Another area in this study is related to mentor matches. These areas can take various forms, but for the purpose of this study, I looked at three types of mentor matches (e.g., matches by teaching/working in the same school, teaching the same content areas, and teaching in the same grade level) that can significantly impact mentoring relationships, satisfaction, and ultimately include novice teachers' self-efficacy. Ganser (1991) found that mentor matches were a significant contribution to mentoring effectiveness to help novice teachers to learn and thrive in their teaching profession. Among these matches, "grade level or content area [seemed to be] the most frequently cited factors associated by the participants with an effective mentoring program" (p. 13).

Thus, self-efficacy becomes the main target as an outcome of mentoring programs in this research framework and that all of these investigated variables may contribute to its construct in some ways. Researchers have found that novice teachers encounter low self-efficacy that can plague their beginning experiences (Tschnnen-Moran, M. & Woolfolk-Hoy, 2006; Woolfolk-Hoy & Spero, 2005), and it is hoped that mentoring programs can further increase their self-efficacy and provide them with adequate support.

Upon these discussions, this research was conceptualized to discover the relationship between mentoring-program relationship quality, satisfaction with the mentoring process, and mentor matches by school, content, and grade levels on novice teachers' self-efficacy. See Figure 1.

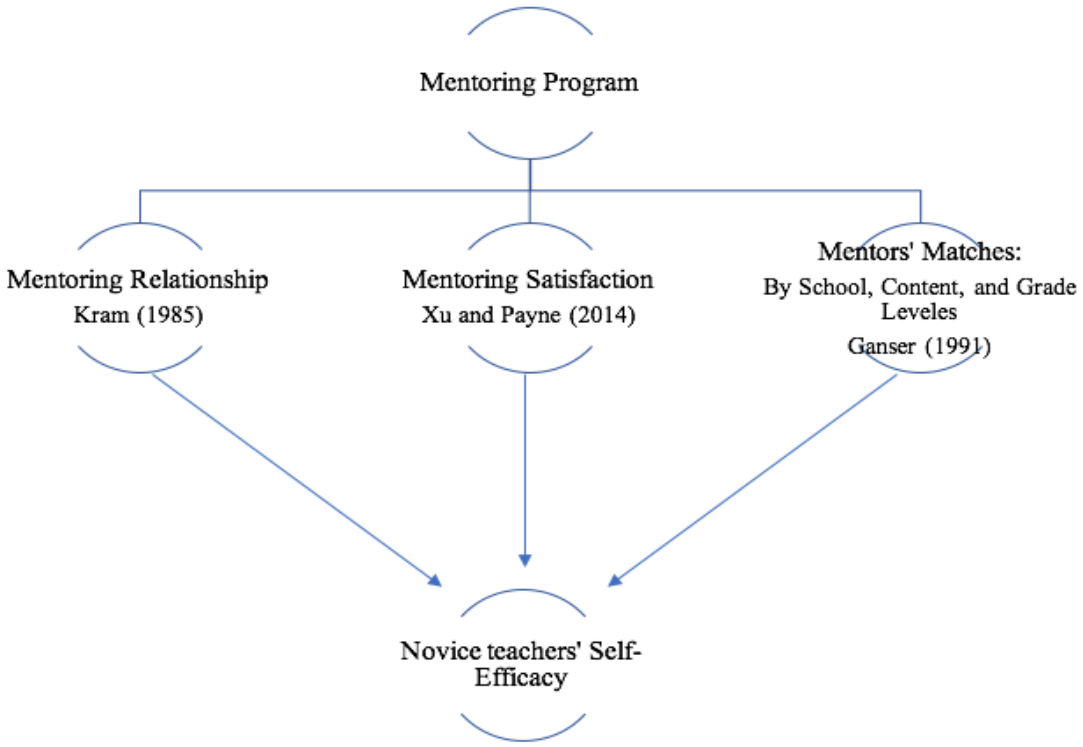

Figure 1. The research framework for mentoring relationship quality matches, satisfaction, and novice teachers' self-efficacy.

Limitations

1. Participants' recruitment from one program across one state. Different programs' contents and constructions can enhance the strength of examining the investigated variables from different perspectives.

2. Self-reporting survey that can create possible deviation on the accuracy of the measurement. Reporting satisfaction can fluctuate from one period to another, so this should lead to a careful analysis and conclusion.
3. The nature of the self-efficacy scale may create possible variations between novice teachers' responses based on their classroom constructions, context, students' diversity, and schools' demographics.

Delimitations

1. Controls for novice teachers' backgrounds and previous preparation.
2. The acquisition of self-efficacy and growth is not related to one distinct aspect, which raises my concern on how to control for this issue. Thus, precautions and possible controls were applied such as investigating specific connections between a mentoring program and self-efficacy.
3. Mentor's quality, training, and experience in mentoring programs. Studies have documented that mentors can have an impact on their mentees' learning outcomes, which can also vary from one mentor to another (Evertson & Smithey, 2000).
4. Mood states can influence the responses of novice teachers.
5. The data was collected in the final weeks of the school year, which may increase dropout rate of teachers' responses to the survey.
6. The qualitative section is collected through the survey, so it was limited to novice teachers' willingness to involve themselves in writing narrative responses.

Ethical Consideration

For ethical purposes, the Institutional Review Board (IRB) approval was obtained to get consent for collecting the data. A copy of IRB approval can be found in Appendix A. The consent form was designed to introduce the study, ensure the confidentiality, introduce the benefits, and explain that there are no distinct risks for participating and responding to the questions. Participants were informed about their rights to withdraw at the beginning of the survey because the submission was an electronic consent where the responses were stored and compiled with other participants and were subjected for analyses procedures. A copy of survey consent can be found in Appendix B.

Definitions of Terms

Mentoring

Mentoring refers to the process of establishing a relationship between more-experienced and less-experienced individuals (Ingersoll & Strong, 2011). The purpose of this relationship is to help novice teachers develop effective skills and adequate expertise (Odell, 1990).

Mentor

Mentor refers to a specialist or experienced teacher appointed to provide guidance for novice teachers' practices (Carney & Hagger, 1996).

Novice Teacher

Novice teacher refers to a new teacher who just joined the teaching profession. The novice teacher is assigned to lead the classroom instruction and establish an effective learning environment. They are identified as novices, beginners, or "newcomers to school teaching" (Ingersoll, 2012, p. 47).

Mentorship Relationship Quality

Mentorship relationship quality refers to the mentorship quality that "captures relational processes between mentor and protégé" (Xu & Payne, 2014, p. 510), which is constructed based on the reciprocal benefits, perceived quality of mentorship effectiveness (Allen & Eby, 2003), and the time of interaction.

Satisfaction with Mentoring

Satisfaction with mentoring refers to novice teachers' attitudes toward the mentoring program, measured by their overall feelings of satisfaction toward mentoring experiences (Xu & Payne, 2014) and their relationship with mentors (Lyons & Oppler, 2004).

Mentor Matches

Mentor matches in this study refer to three distinct characteristics that mentors can have: existence in the same school, teaching the same content areas, and teaching the same grade level(s).

Self-Efficacy Belief

Self-efficacy belief "refers to beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments" (Bandura, 1997, p. 3). Bandura's perspective emphasized that experience and reflection can construct self-efficacy belief.

Summary

This study explored the relationship between mentoring program quality, satisfaction, and mentor matches on novice teachers' self-efficacy in a Midwestern State. Chapter I included an introduction to the research topic and my personal context, with

highlighting my interests in focusing on mentoring programs and self-efficacy. Also, the chapter contained the study purpose, significance, and the questions. This chapter discussed the research framework, the study limitation, delimitation, ethical consideration, and the definition of terms.

The next chapter highlights the reviewed literature on this topic, starting with detailed information on novice teachers' self-efficacy, its importance, resources, and connection to mentorship. Also, the literature review discusses mentoring program movement and growth, novice teachers' skill development, needs, mentoring quality, satisfaction, and mentors' recruitment, selection, training, and matches. In addition, Chapter II contains an overview of mentoring programs across the United States and in the Midwestern State that was studied in this paper.

CHAPTER II

LITRATURE REVIEW

Mentorship

Mentoring programs have become familiar in educational settings and have gained wide-spread support that mentors can provide effective assistance to novice teachers (Portner, 2002), as a part of continued development (Bush, Coleman, Wall, & West-Burnham, 1996). For example, mentoring programs are recognized as an effective way to help novice teachers develop their teaching skills in the early stages of their careers, to adjust pre-existing talents, and not be isolated from the school community. The earliest recognition of the mentoring idea was "found in Homer's epic poem *The Odyssey",* a story of the return of Odysseus, King of Ithaca. Odysseus assigned his son, Telemachus, to a mentor who could provide advice and guidance during his development (Awaya et al., 2003; Janas, 1996; Odell, 1990, p. 5). Since that introduction, "mentoring has become firmly tied to the educational process" (Janas, 1996, p. 2). Mentoring programs are essentially connected to the development of novice teachers' competency. This helps them engage more quickly in the teaching profession, which increases the importance of mentoring relationship quality in the educational setting to ensure that novice teachers receive adequate assistance and support.

Ingersoll and Strong (2011) noted an issue in examining the effectiveness of mentoring programs that did not show deep analysis and understanding of their content and quality. Ingersoll and Strong (2011) emphasized that "the majority of empirical

studies . . . were reports of program evaluations that collected data on outcomes solely from those who had participated in the induction programs being evaluated" (p. 210). This encourages further examination of specific areas of mentoring implementation. In this dissertation, I explored the influence of some aspects of mentoring programs such as relationship quality, satisfaction, and mentor matches on novice teachers' self-efficacy. In general, there is a promising relationship between mentoring programs and self-efficacy, but it is still related to the impact of mentoring programs and mentor's characteristics (Ragins et al., 2000).

Novice Teachers' Self-Efficacy

Self-efficacy is an important psychological subject in the field of education that has led educators to attentively examine its impact on individuals' performance and commitment (Schunk & Pajares, 2009). Teachers' self-efficacy has become an intriguing area that has compelled many researchers to explore its applications, resources, and development (Schunk & Pajares, 2009). Studies have noted that novice teachers struggle to thrive in their beginning careers (Buchanan, Prescott, Schuck, Aubusson, & Burke, 2013). This leads educators to focus primarily on how they can support teachers' development and success.

Importance of Self-Efficacy

Teachers' self-efficacy is an important factor in the teaching profession and practices. With the increase of teachers' qualification demands (Darling-Hammond & Berry, 2006), self-efficacy has become crucial in the profession because it impacts teachers' perception of their own capability to develop skills and guide their students to succeed (Guo, Connor, Yang, Roehrig, & Morrison, 2012). The strength of self-efficacy

belief can help teachers make a difference in their classrooms and teaching practices, especially when they encounter the most difficult and unwilling students. The self-efficacy belief is tied to teachers' endeavors to provide adequate support to their students (Bandura, 1997). In other words, self-efficacy is accompanied by the advantages of persistence and beliefs in possibilities. Tschannen-Moran and Woolfolk-Hoy (2001) emphasized that "a teacher's efficacy belief is a judgment of his or her capabilities to bring about desired outcomes of student engagement and learning, even among those students who may be difficult or unmotivated" (p. 783). Thus, those teachers with high self-efficacy should feel more willing to perform difficult tasks and deal with classroom challenges. Bandura (1982) indicated that individuals with strong self-efficacy can show more resilience and effort in their performance.

Self-efficacy is a critical area that is connected to teachers' ability to fulfill their duties. Decades ago, Bandura (1982, 1997) viewed self-efficacy as one of the factors that influence individuals' behavior and productivity. Bandura stressed that self-efficacy is connected to individuals' behavior in various ways that determine their capabilities to deal with prospective action. This view leads to the importance of differentiating between individuals' knowledge and required behavior to demonstrate the appropriate action. Furthermore, Bandura (1982) used *self-referent thought* as a related term to self-efficacy that plays a significant role in how individuals can perceive themselves to produce a judgment on how they can perform. The judgment of capabilities can enforce one's *cognitive, social,* and *behavioral skills* in a way that regulates the behaviors. Bandura (1982) argued that the knowledge is not enough to perform a particular operation "because [the] self-referent thought also mediates the relationship between knowledge

and action" (p. 122). The connection of self-efficacy and operational behavior stems from individuals' determination to act or avoid the action based on how they can perform (Bandura, 1982), which is critically related to the motivation process that leads to behavioral adaptation (Schwarzer, 1992). Thus, the increase of self-efficacy can lead teachers to significantly fulfill their teaching goals because "a strong sense of competence facilitates cognitive processes and academic performance … People with high self-efficacy choose to perform more challenging tasks" (Schwarzer, 1992, p. ix).

Studies examined teachers' self-efficacy based on three distinct areas of teaching operation: classroom management, instructional strategies, and students' engagement (Friedman & Kass, 2002; Klassen & Chiu, 2010; Kleinsasser, 2014; Lowery, 2012; Swan, Wolf, & Cano, 2011; Tschannen-Moran & Johnson, 2011; Tschannen-Moran & Woolfolk-Hoy, 2001). In addition, Black (2015) explored the development process of teachers' self-efficacy at the end of their teacher preparation. Black found four challenging areas that can influence teachers' self-efficacy: "(1) effective classroom management, (2) successful curriculum planning and implementation, (3) positive rapport with students, and/or (4) supervising teacher approval" (p. 85). These areas that concern self-efficacy are similar to the current measurements' construction associated with teachers' skills and self-efficacy.

Schwarzer, Schmitz, and Daytner (1999) developed their teachers' self-efficacy based on four distinct domains: "(a) job accomplishment, (b) skill development on the job, (c) social interaction with students, parents, and colleagues, and (d) coping with stress". Interestingly though, Schwarzer et al. (1999) construct another domain (stress) that can get connected to teachers' self-efficacy. Stress can coincide with task difficulties

and failure. One study (Jerusalem & Schwarzer, 1992) found that high self-efficacy could decrease with multiple failure experiences. Jerusalem and Schwarzer emphasized, however, that individuals with high self-efficacy tend not easily to experience stress.

Despite the studies that were conducted on self-efficacy, Woolfolk-Hoy, Hoy, and Davis (2009) mentioned that teachers' self-efficacy faced criticism that is related to the nature of developed scales. Their argument was built upon the teachers' distinction of evaluating their perceptions on these scales. For example, Woolfolk-Hoy et al. (2009) indicated that students, classes, and majors are the biggest concerns on evaluating teachers' self-efficacy because when teachers are asked about their ability to demonstrate the task or deal with students, the classes and students' diversity can deviate their perceptions. Djigic, Stojiljkovic, and Doskovic (2014) explored teachers' experiences with self-efficacy, which was quite high, but the researchers emphasized the importance of providing support to beginning teachers in order to further improve their performance.

Regarding the investigation on self-efficacy, Klassen and Chiu (2010) mentioned that "self-efficacy measures should reflect a particular context or domain of functioning, rather than global functioning" (p. 741). For example, instead of stating a general task function, it is critical to focus on how the teacher "can do" with linking that to teachers' belief and confidence.

Sources of Teachers' Self-Efficacy

A complex body of literature exists to investigate the sources of teachers' self-efficacy that utilized Bandura's (1997) theory of self-efficacy. Teachers' self-efficacy was conceptualized based on teachers' perceived ability to demonstrate teaching tasks. As discussed earlier, these tasks were conceptualized as teachers' ability to demonstrate

effective teaching instruction, classroom management, and student engagement (e.g., Tschannen-Moran & Woolfolk-Hoy, 2001). In exploring individuals' self-efficacy, Bandura's *social cognitive theory* guided many studies in this field, which is largely considered as a foundational base for understanding the concept of self-efficacy. This theory poses four sources that contribute to the development of self-efficacy beliefs that has gained wide discussion and exploration.

The first source is *mastery experience*, which focuses on the influence of teaching experience to enhance teachers' self-efficacy. The hypothesis of mastery experiences confirms that teachers can develop their self-efficacy by their exposure to multiple experiences in the field of the teaching profession. This is significantly related to Schwarzer et al.'s (1999) construct of a self-efficacy measure that focused on skills' development over time. Successful experiences can support one's endeavors to continue his or her skills development. Thus, it is expected that successful experiences tend to increase one's self-efficacy (Bandura, 1997).

However, Morris, Usher, and Chen (2016) reviewed many studies that investigated the sources of teaching self-efficacy. Their collective review revealed multiple variations and contradictions regarding the connection between mastery experience and teachers' capabilities: "teaching experience does not, in itself, persuade teachers of capabilities" (p. 16). Regarding mentoring programs, it is critical to explore to what degree mentoring programs can promote novice teachers' ability to perceive themselves in a positive light. Determining this is essential to examining how mentorship can support novice teachers' experience and increase their self-efficacy. Successful experience can increase teachers' self-efficacy (Jerusalem & Schwarzer, 1992), but also it

is up to the kinds of support that teachers receive along with a positive performance. It is noteworthy that the reason beyond these fluctuated findings on mastery experience is that various resources can contribute to one's experience (Morris et al., 2016). Instead of focusing on the performance and ability of task demonstration, other resources can influence this experience such as community and social support. Also, the concept of mastery experiences is related to teachers' performance of their instruction and interaction with students (Morris et al., 2016).

Vicarious experience is the second source and is related to the process of observing other individuals who successfully perform challenging tasks. Bandura (1997) proposed that vicarious experiences serve as a foundational basis for human learning through observational processes that can increase individual self-efficacy beliefs. Individuals contribute to their behavioral motivation and reciprocal relationships that can shape individuals' interaction and influence on each other (Bandura, 1977). Notwithstanding, individuals can have various attitudes toward perceiving observational modeling, which results in different feelings and reactions based on how observers appraise the model (Bandura, 1997). In mentoring programs, vicarious experiences may differ based on the programs' quality and construction and whether there is an opportunity for novice teachers to observe experienced teachers.

Modeling is also beneficial for veteran teachers who work as mentors. Feiman-Nemser (2001) assumed that mentor teachers who have been appointed to observe and direct beginning teachers could gain professional growth because the mentoring program is one professional-development practice that contributes to supporting veteran teachers' knowledge and expertise and prepares them to be teacher educators. However, Morris et

al. (2016) mentioned that vicarious experience is still ambiguous in terms of exploring all possible aspects that may influence teachers' self-efficacy (e.g., colleagues complain about teaching). Morris et al. (2016) warrant the importance of conducting "more work … to address how symbolic models (e.g., Internet, articles, films) and cognitive self-modeling influence teaching self-efficacy" (p. 19). It is thus critical to explore novice teachers' perception on how they perceive the role modeling of assigned mentors, while considering the community and colleagues' support as confounding variables that can carry out a significant impact on one's self-efficacy.

Another source of self-efficacy is *verbal persuasion.* This source mainly focuses on the support and persuasion that one person can give to another. It serves to strengthen individuals' beliefs about themselves. Bandura (1997) assumed that verbal persuasion is not equal in its importance to the sense of successful experience or observational modeling of a successful person. Zelenak (2015) linked the strength of verbal persuasion to the mastery experience. Persuasion with a sense of accomplishment activates individuals' self-efficacy to realize that they are competent to perform a task. For example, positive feedback and messages can promote teachers' self-efficacy.

The final influential source of self-efficacy beliefs is *physiological and affective states*, which are tied to individuals' perception and attitude toward appraising themselves. Positive attitudes can enhance self-efficacy, whereas negative perception can result in lower self-efficacy (Bandura, 1997). According to Bandura, negative feelings, such as illness or feeling of inadequacy, impact individuals' self-efficacy. Therefore, individuals' feelings and thoughts about their ability can lead to low self-efficacy, which increases negative feelings such as stress and anxiety. Morris et al. (2016) emphasized

that individuals who perceive high capabilities on their accomplishments tend to have less negative emotion (e.g., stress and burnout), which can positively reflect on their self-efficacy. Also, Schleicher (2015) asserted that positive interaction and collaboration with colleagues can promote teaching self-efficacy. Schleicher (2015) confirmed that "teachers' perception of school climate, the collaborative culture in school, and school leadership greatly affect their levels of stress, self-efficacy, and job satisfaction" (p. 12). These different emotions can impact teachers' self-efficacy.

Teachers' Self-Efficacy and Mentorship

In general, mentoring programs were observed as a profound kind of support that teachers can receive to improve their teaching practices and retention in school (Smith & Ingersoll, 2004). In fact, researchers have emphasized that the idea of a mentoring program is designed to reduce teacher attrition and promote a continued improvement of teachers' qualification (Fletcher & Strong, 2009). With the increase of mentoring programs across the nation (Darling-Hammond, 2003), each underwent various approaches and implementation. This increase has led researchers to focus on many possible outcomes of these programs. Thus, self-efficacy has emerged as one of the most significant and desirable outcomes that educators hoped to improve based on providing novice teachers with appropriate mentorships. Studies have investigated the impact of mentoring on novice teachers' self-efficacy from different aspects (e.g., Kapadia, Coca, & Easton, 2007; Smith & Ingersoll, 2004), but the influence of mentoring programs on novice teachers' self-efficacy is still an open question with regards to quality, satisfaction, and mentors' characteristics.

Ackermann (2012) examined the impact of mentoring and induction programs on

beginning teachers' self-efficacy. The study did not find a statistical impact of the mentoring program on teachers' self-efficacy beliefs when compared new teachers who were assigned to mentors to those without mentors. Ackermann found that positive and negative attitudes of novice teachers about their mentoring programs can influence their self-efficacy. Despite these findings, Ackermann indicated the need "for further studies [that] might examine specific components of mentoring and how they might influence the self-efficacy beliefs of novice teachers" (p. 64). Therefore, these findings warrant a need for further examination to explore specific mentoring elements that can influence novice teachers' self-efficacy such as mentoring relationship, mentoring satisfaction, and mentor matches.

Changes in novice teachers' self-efficacy have been observed, and studies showed various fluctuation on self-efficacy among teachers based on their experiences. Swan, Wolf, and Cano (2011) reported challenging findings that reflect teachers' self-efficacy from the beginning of their teaching practices as student teachers through the first three years in the teaching profession. The study reported that first-year teachers have lower self-efficacy when they were compared to their student teaching experience, but there was an increase for self-efficacy in the second and third year of teaching experience. Swan et al. (2011) indicated that the decline of beginning teachers' self-efficacy may be connected to the lack of support that teachers received in their beginning teaching, suggesting further active approach of mentoring support is needed. Similar approaches (Woolfolk-Hoy & Spero, 2005; Richter et al., 2013) emphasized that the first year of teaching is a critical phase in teachers' reform and growth, which coincides with low increase and fluctuation of self-efficacy. Specifically, Woolfolk-Hoy and Spero (2005)

found a decrease in beginning teachers' self-efficacy compared to student teachers. They argued that the decline of novice teachers' self-efficacy is related to the actual experiences and interactions with their students, which can lead to the recognition of "teacher self" and their perception of understanding their capabilities. Possibly, student teachers may receive more support compared to first year teachers. LoCasale-Crouch, Davis, Wiens, and Pianta (2012) found a positive connection between mentoring support novice teachers received and their self-efficacy. Knobloch and Whittington (2002) discussed factors that influence novice teachers' confidence and self-efficacy. Among these identified factors were the support and feedback novice teachers received.

Harris (2015) examined the influence of mentors' role on beginning teachers' attitude and perception of their performance and teaching practices. The study revealed that mentoring programs could support three different areas, encompassing "student relationships, locus of control, and using data" (p. 85). These areas are critical in terms of teachers' self-efficacy. Specifically, Harris asserted the importance of helping novice teachers think and build alternative strategies of teaching issues within their control, which can help mentees develop their sense of self-efficacy that reflect their capabilities of problem-solving. Harris (2015) emphasized that "the mentors' goal is to build a stronger sense of self-efficacy within mentees. With a stronger sense of self-efficacy, the mentees will adopt a more problem-solving attitude towards issues in the classroom" (p. 86). While this is a promising persuasion of mentorship effectiveness to support teachers' efficacy, the study did not control or examine teachers' self-efficacy within the implementation of these mentoring strategies. Since the author mentioned the importance of integrating these strategies into mentors' training, it is worth addressing the

proportionality of teachers' efforts to control for students' performance, achieved outcomes, and sense of self-efficacy. An example of this would be how much effort that teachers dedicate to achieve intended goals corresponds with their development of self-efficacy.

The establishment of mentoring programs may play a significant role in providing adequate advice and assistance. Catapano and Huisman (2013) conducted a study on newly assigned mentors who shared their previous experience with mentoring programs at the beginning of their teaching careers. They reported that they critically lacked appropriate chances to meet their mentors, leading them to feel lonely in their schools. Consequently, those mentors then prioritized the importance of providing adequate meeting interaction with their mentees to ensure that mentees received enough support. Interaction is an important component that can strengthen the relationship between mentors and mentees and influence self-efficacy. Tschnnen-Moran and Woolflk-Hoy (2006) indicated that beginning teachers oftentimes show low self-efficacy, which requires educators to pay further attention to efficacy in various dimensions to ensure that beginning teachers are developing positive attitudes toward their perceived self-efficacy. More crucially, self-efficacy that is formed over years is not easily changeable because low self-efficacy performers may show resistance to change their self-efficacy beliefs due to inadequate self-trust (Bandura, 1997). Significant assistance is needed to help them avoid or overcome these issues.

Nonetheless, this relies on how their mentors and supervisors can trigger positive persuasion to change these hidden feelings. Examining the impact of mentoring programs on beginning teachers' self-efficacy can further expose educators to the effectiveness of

these programs. Even though researchers have examined various intended outcomes, there is a paucity of studies that examine specific elements of mentoring impacts such as mentoring relationships, satisfaction, and mentor matches on novice teachers' self-efficacy. Mentoring programs provide a profound experience of modeling and interaction between mentors and mentees, yet they are critical in terms of mentoring elements and characteristics (Leshmen, 2014). Therefore, more focus on these elements and characteristics of mentoring programs is crucial, which increases the importance of mentoring quality in the educational setting to ensure that novice teachers receive adequate assistance and support.

Mentoring Program Development

Discourse on the importance of mentoring programs arose in the 1980s (Feiman-Nemser, 2003; Greiman, 2007; Hobson, Ashby, Malderez, Tomlinson, 2009; Langdon, Alexander, Ryde, Baggetta, 2014). The movement to adapt mentorship focused on how novice teachers can build a relationship with experienced teachers in schools. Before the advent of the mentoring program culture as a potentially interesting idea for educators, novice teachers relied on their own efforts to build connections with experienced teachers in order to learn about their particular school's properties. This led many educators to stress the importance of mentoring programs to help novice teachers engage in professional practices and share their concerns with others who could provide significant guidance (Stansbury & Zimmerman, 2000). Also, Stansbury and Zimmerman emphasized a vital concern that mentors should be different from evaluators because the evaluation process can distort the essential goals of mentoring programs that exist to guide teachers' work and help them increase their effectiveness. Even more, Hirsch et al. (2009) found

three states, “Indiana, Washington, and Oregon expressly forbid mentors from serving as an evaluator of the new teachers they mentor” (p. 18). All of these discussions about mentoring programs contribute to the development and effectiveness of these programs to provide novice teachers with the optimal assistance they need.

When it comes to the development of mentoring programs in schools, “many educators believe that contemporary teacher induction practices, especially mentoring, have eliminated or reduced the isolations of novice teachers in many schools” (Davis, 2001, p. 1). Mentoring programs generally provide novice teachers with social and emotional support (Achinstein & Davis, 2014; Achinstein & Athanases, 2010; Wang & Odell, 2002), which increases the researchers’ focus on the importance of professional practices concerning the novices’ knowledge and expertise (Achinstein & Davis, 2014). Furthermore, mentoring induction programs have been growing in the educational community as a result of numerous problems encountered by novice teachers (Fideler & Haselkorn, 1999). An essential purpose of a mentoring program is to help novice teachers become familiar with the teaching profession and to help them with various obstacles that may arise when they lead their classrooms (Feiman-Nemser, 2001; Wepner, Krute, & Jacobs, 2009).

Equally important, studies have documented that mentors can have an impact on their mentees regarding teacher retention (Black, Neel, & Benson, 2008; Kapadia, Coca, & Easton, 2007; Ciriza & Perez, 2005; Smith & Ingersoll, 2004; Wills, 2014), classroom practices (Davis & Higdon, 2008; Evertson & Smithy, 2000; Mathur, Gehrke, & Kim, 2012; Stanulis & Floden, 2009), student achievement (Adams, 2010; Fletcher & Strong, 2009), and job satisfaction (Xu and Payne, 2014). These findings indicated that

mentoring programs can have various impacts on novice teachers to thrive in the field of teaching. Given that there are various studies that support the effectiveness of mentoring programs (e.g., Smith & Ingersoll, 2004), some studies did not consistently support these findings (e.g., Glazerman 2008, 2009, 2010). Therefore, these examples alert one to the importance of focusing on the implementation of mentoring programs to ensure that mentees are receiving appropriate and adequate mentoring opportunities to support their needs.

With the increase of wide recognition of mentoring programs as a way to contribute to teacher quality, states have increased their endeavors to establish mandated policies and standards to ensure that mentoring programs meet their intended goals (Washburn-Moses, 2010). The lack of constructed policies can result in mentoring deficiencies and issues, leaving ambiguous guidance for states and districts that participate in these programs. Clear policies and goals are crucial, especially when these policies focus on providing novice teachers with the adequate assistance they need. In essence, these policies should focus on how districts and states ensure mentoring quality and effectiveness. Ganser et al. (1998) emphasized that the likelihood of effective mentoring programs is strongly related to their well-designed construction and mentoring goals that affirm the fulfilment of requisite needs of novice teachers.

For a good mentoring quality, Goldrick (2016) discussed various criteria that states should consider when establishing an effective program. These criteria would hopefully lead states to require mentoring programs for all novice teachers, focus on mentors' training, selection, and matches, increase interaction time, and involve novice teachers in professional activities such as regular observation. Also, Goldrick suggested

that states should reduce both mentors and novice teachers' workload, establish standards and policies to regulate the process, provide funding support, and link mentoring participation to teaching license. Kardos and Johnson (2010) emphasized that well-constructed and implemented mentoring programs are needed to ensure that novice teachers receive responsive assistance. Nonetheless, policies do not guarantee the effectiveness of mentoring implementation (Washburn-Moses, 2010; Hirsch et al., 2009).

Notwithstanding that mentoring programs are recognized as a way of establishing relationships between experienced teachers and novice teachers (Inzer & Crawford, 2005), which is gaining momentum in educational settings, researchers distinguish between two significant types of mentorships, including formal and informal mentoring programs (e.g., Desimone et al., 2014; Inzer & Crawford, 2005; Smith & Ingersoll, 2004; Wanberg, Kammeyer-Mueller, & Marchese, 2006). These types of mentorships can critically impact the mentoring quality and construction, but there are few examinations for the impact of the informal type on mentoring outcomes since most researchers focus on examining the impact of the formal program on novice teachers' practices (Desimone et al., 2014).

Desimone et al. (2014) examined the characteristics of formal and informal mentorship and defined formal mentoring as a mandated communication between mentors and novice teachers under the supervision of a district or a state. On the other hand, informal mentorship refers to a novice teacher's desire to establish a voluntary relationship with an experienced teacher who can provide voluntary support to them as needed. Interestingly, Desimone et al. (2014) found that "novice teachers rated informal mentors slightly higher than formal mentors in all the three categories (mentor's

mentoring ability, mentors' knowledge of mathematics, and mentor's knowledge of teaching" (p. 99).

By way of contrast, Desimone et al. indicated that formal mentorship can involve novice teachers in more active and professional learning activities. Thus, Desimone et al. highlighted the importance of aligning mentoring program aims, construction, and implementations with novice teachers' needs. The teaching challenges and conditions influence novice teachers' needs and development, which can create variations among teachers' needs. This warrants the importance of exploring the impact of the mentoring relationship quality on novice teachers' self-efficacy and attitudes. Also, in the case of mentoring relationships, mentor matches can play a significant role in strengthening the interaction and communication between mentors and mentees (Desimone et al., 2014).

Wanberg et al. (2006) reviewed the differences between formal and informal mentoring relationships. Formal mentoring has a different process of establishment, which is constructed on a more distinct time and structure, and these "mentoring relationships are arranged for a specified duration" (p. 411). Informal relationships tend to promote more mutual understandings and benefits (Ragins et al., 2000), which could develop into more open interactions.

Novice Teacher Skill Development

According to Feiman-Nemser (2003), "new teachers need three or four years to achieve competence and several more to reach proficiency" (p. 27). Researchers document that teaching is constructed on multiple skills that require distinct support (Gibbs & Coffey, 2004). When novice teachers enter the field of teaching and become involved in school duties, they do not struggle with the lack of theoretical preparation,

but may struggle to put this "theoretical base" into practice, so they can confidently make decisions (McCann, 2010). Therefore, a mentor's responsibility is to help those novice teachers with planning purposes and the effectiveness of incorporating the theoretical guide into realistic practices (McCann). Interestingly, though, novice teachers across the United States derive pedagogical knowledge from different teacher education programs that contribute to their solid preparation. This is to say that mentoring programs function to close the gap between teacher preparation and acquiring necessary skills to help them succeed.

Mentoring programs can bridge the transitions of novice teachers into new career environments, where teachers are required to make appropriate decisions and deal with unexpected issues in the classroom or school community. McCann, Jones, and Aronoff (2012) called these transition processes *critical junctures,* which refers to the transitional experiences that novice teachers undergo in different ways that lead them to either success or failure in their teaching profession. In essence, this experience of novice teachers' transitions serves as a vital factor that contributes to teachers' self-efficacy (McCann et al., 2008) that can later hone their confidence, thoughts, and accomplishments.

Accumulated experience requires several challenging episodes and practices of theoretical application in order to gain competence and capability in dealing with teaching complexity. To help novice teachers increase their competence, attentive efforts should focus on their teaching skills and developments to direct their effectiveness. Therefore, McCann (2010) thought that mentors' responsibilities as experienced teachers is to offer wise advice about choosing an appropriate curriculum and instructional plan

based on their experiences in order to help novice teachers envision an appropriate plan for their teaching practices. Novice teachers need to build their experiences to effectively deal with planning and implementation. Rivkin, Hanushek, and Kain (2005) emphasized that the essential phase of teachers' development is related to their skills acquisition in the beginning years of teaching. Rivkin et al. (2005) concluded that novice teachers' efficiency is less likely to continue improving "after the first three years" (p. 449). Thus, attention should focus on how mentoring programs can help novice teachers improve their performance in the beginning of their teaching career and help them build their confidence and self-efficacy.

The development of teachers' skills plays a significant role in shaping the demand for mentoring programs to promote novice teachers' professionalism. Devos (2010) used the term *governmentality* to theorize the transformative period for novice teachers to build their career identity through sets of practices, instructions, and improvements in the work milieu. Governmentality affirms the assumption that novice teachers build their teaching identity based on the guidance they follow or the support they receive in order to change their behavior and act in ways that harmonize with the teaching duties. Assuming that mentoring programs can contribute to the formation of teachers' identity, it is still difficult to pinpoint the contribution of mentoring programs to this stance. Devos (2010) emphasized that "the matter of teacher identity . . . is never explicitly discussed or theorized" (p. 1221). Therefore, there is no specific explanation of how a mentoring program can have a distinct theoretical base to form a teacher's identity. Nonetheless, Feiman-Nemser (2001) thought that mentoring programs provide ways of developing teaching identity by helping novice teachers navigate their duties and help them grow

their teaching skills since "constructing a professional identity is a complex [and] ongoing process" (p. 1029).

Although mentorship has shown various approaches across the states (Ingersoll & Strong, 2011), there is a widespread approach for mentoring programs to improve teachers' qualifications and skills (Algozzing, Gretes, Queen, Cowan-Hathcock, 2007; Carver & Feiman-Nemser, 2009; Devos, 2010; Fletcher & Barrett, 2004). In an attempt to understand novice teachers' development and its relation to mentoring programs, Carver and Feiman-Nemser (2009) discussed the connection between the policies of induction programs with an emphasis on the mentoring process and teachers' development. Mentoring programs are designed to provide novice teachers with various kinds of support and refine their teaching skills and behavior in the school community. Carver and Feiman-Nemser concluded that mentoring program quality is crucial for teachers' development, but these programs need clear and concise policies that can mandate the effectiveness of mentoring programs to provide novice teachers with adequate assistance. The growth of teachers' skills and expertise needs continued professional development. Despite the fact that teaching problems can arise in or out of the classroom, Carver and Feiman-Nemser mentioned that "some difficulties faced by novice teachers are endemic to learning to teach and will resolve themselves with time on the job. But many problems and challenges require targeted assistance" (p. 323).

Novice Teachers' Needs

Mentoring programs are considered a continued preparation for novice teachers to increase their readiness for challenging classrooms. Hoerr (2005) argued that discovering novice teachers' needs is crucial to help them succeed. Even though mentoring programs

and professional development activities exist to help these teachers navigate teaching challenges, a significant understanding of their needs can help explore appropriate assistance and support that increase their retention in the teaching profession. Novice teachers' needs are crucial to understanding the types of assistance that novice teachers should seek from their mentoring programs. In terms of teachers' development, teaching is known among educators as a complex task that requires continued learning to enhance their skills for creating a powerful learning environment (Darling-Hammond, 2006; Feiman-Nemser, 2001).

According to Darling-Hammond (2006), the complexity of teaching is related to various aspects of the teaching process that can have critical ramifications on beginning teachers' skills. The ramifications of these required skills derive from the nature of teaching as multifunctional and multidimensional relative to diverse students' learning, instructional design, assessment, classroom management, and knowledge demonstration. The complexity in the teaching profession refers to teachers' abilities to deal with multiple goals and diverse groups of learners, as well as their abilities to develop integrated knowledge of theories and actions (Darling-Hammond). Some teacher education programs have not adequately been able to "respond to these problems" (Hammerness et al., 2005, p. 360), which can aggravate the issue of preparing classroom-ready teachers. During prospective teachers' preparation, students need to develop solid foundational pedagogical and practicum skills that assist them in demonstrating their teaching tasks effectively. The mentoring process intends to strengthen these skills. Notwithstanding, there are no specific ways to provide distinct procedures that ensure securing and attaining these strengths.

In terms of novice teachers' needs, Feiman-Nemser (2003) emphasized that "beginning teachers have legitimate learning needs that cannot be grasped in advance or outside the contexts of teaching" (p. 26). These learning needs reflect the areas of struggle or challenges that require assistance to help novice teachers grasp the necessary skills. Feiman-Nemser indicated that new teachers need to learn how to be problem solvers and to think and act professionally in order to overcome various classroom issues and communicate effectively with other colleagues. Athanases (2013) mentioned that "teaching and learning problems usually do not leap out and make themselves known," instead these problems can unexpectedly be encountered by new teachers or even more experienced teachers (p. 44). This requires further effort to focus on how novice teachers can recognize themselves as reflective practitioners who can effectively work to solve these issues. Therefore, mentors, coordinators, and practitioners should go beyond traditional mentoring practices that focus essentially on emotional and social support because novice teachers need to focus on teaching practices, including establishing effective learning environments and designing reliable instructions and assessments (Feiman-Nemser, 2003).

Although novice teachers have widespread support, they have different needs and struggle in different areas of competence. Novice teachers' needs of professional development should be carefully identified through empirical research to define and construct effective mentoring programs because these needs can provide distinct mechanisms to define mentoring elements and mentors' roles. Therefore, an explicit connection between mentoring quality and novice teachers' needs is crucial to create an effective mentoring program (Feiman-Nemser, 2003). For effective understanding of

mentees' needs, Pennanen, Bristol, Wilkinson, and Heikkinen (2016) emphasized the importance of constructing mentoring practices based on prearrangements of mentees' needs. For example, mentors should focus on exploring new teachers' needs to establish the mentoring goals, which can differ among new teachers. Pennanen et al. (2016) were wary that unified and preconstructed mentoring practices are not effective to meet new teachers' needs because mentoring practices should be built on what new teachers "would 'want to work on'" to deal with encountered obstacles that can threaten their teaching practices (p. 40).

Building mentoring goals and elements based upon new teachers' needs requires further understanding of mentors' roles. Fagan (1988) indicated that mentors tend naturally to focus on mentees' needs and expectations, which usually is a part of the established relationship between mentors and mentees. Fagan emphasized that mentors' roles are shaped by mentees' willingness to utilize their mentors and establish effective learning aims. Strong relationships between mentors and mentees can increase their positive interactions based on mentees' trust (Martin, 2013). Guise (2013) stressed the importance of building effective relationships that separate the process of mentorship from evaluation, which is an inherent issue that threatens the effectiveness of mentoring programs. For instance, new teachers should realize that mentoring programs are designed to help them improve their teaching quality and help them overcome encountered classroom challenges. Kram (1985) indicated that one of the issues that can hinder the effectiveness of a mentoring relationship is a deficiency of trust that can prevent mentees from seeking assistance as needed. Regarding this issue, the examination of novice teachers' satisfaction with mentoring programs is important because

satisfaction is related to the fulfillment of individuals' needs, which can allow for further conceptualization of mentoring effectiveness.

Quality and Variation of Mentoring Programs

The characteristics of mentoring programs and their quality play significant roles in determining mentoring impacts. Moir (2009) thought that during teachers' mentoring programs, mentors should assist beginning teachers in setting professional goals, planning the curriculum, assessing students' work, and reflecting on their practices. This is critical in terms of mentoring quality and implementation. The issue of quality is related to the development of mentoring inductions that vary based on states' policies that govern the funding process and mentoring criteria. This can result in difficulties when educators discuss the program's effectiveness, since the types, elements, and policies are all determinants of mentoring quality (Goldrick, Osta, Barlin, & Burn, 2012). Womack-Wynne et al. (2011) emphasized the importance of setting mentoring goals and exploring mentees expectations, which requires mentors and mentees "to determine the best activities to maximize their strengths and compensate for and remediate their weaknesses, the mentoring relationship will be infinitely more successful" (p. 7). Mentoring relationships can further be beneficial for both mentors and mentees (Womack-Wynne et al., 2011). For example, the establishment of mentoring relationships can increase the reciprocal relationships between mentors and mentees, which can increase their idea exchanges and willingness to utilize their relationships in ways that support their needs.

Recently, researchers have focused on the importance of mentoring sufficiency and its accompanied policies. For instance, one study (Goldrick et al., 2012) documented disparate approaches of programs among the states. This disparity results from different

requirements and implementation. There are:

> only three states—Connecticut (CT), Delaware (DE) and Iowa (IA) that require schools and districts to provide multi-year induction support to novice teachers, require teachers to complete an induction program to obtain a professional teaching license, and provide dedicated state induction funding (p. iv).

Other states have various requirements, implementations, and funding processes that need more-developed policies to ensure comprehensive approaches of mentoring programs and develop appropriate quality expectations that support new teachers (Goldrick et al., 2012). According to the National Center for Education Statistics (NCES; 2012), there are 13 states that have established mandated standards and regulations for mentor training and mentor–mentee matching for mentoring purposes. The quality of mentoring programs requires further efforts from educational leaders to significantly focus on high expectations and requirements for program development. This can ensure that novice teachers have adequate assistance to promote their teaching efficacy and effectiveness (Moir & Gless, 2001).

Goldrick et al. (2012) called on states to reform and craft their mentoring policies to meet the needs of beginning teachers. Regardless of the differences between states' approaches, studies reported that mentoring programs have many differences that influence their quality and effectiveness (e.g., Polikoff, Sesimone, Porter, & Hochberg, 2015; Smith & Ingersoll, 2004). For example, Smith and Ingersoll (2004) claimed that mentoring programs have different implementation lengths and various characteristics that can cause possible variations in their outcomes. The variation is related to the programs' intensity and duration (Ingersoll & Strong, 2011). Glazerman et al. (2010)

reported in their three-year study that there was no significant impact of intensive mentoring treatment on new teachers' outcomes of retention and classroom practices. This study seems to contradict other studies (Kapadia et al., 2007; Smith & Ingersoll, 2004) that found mentoring programs impact beginning teachers' intentions to stay or leave the profession.

More critically, relationships are considered to significantly influence the beginners' professional growth. Studies supported the importance of strong relationships between mentors and novice teachers and can be considered as critical support to the mentorship interaction quality (Allen & Eby, 2003; Fletcher & Strong, 2009).

Rockoff (2008) examined the impact of mentoring quality that was operationalized by the impact of hours of interaction and mentors' characteristics on beginning teachers' success to establish effective classroom management. In addition, the study continued to examine the impact on students' achievement. There was an apparent relationship between time of interaction and mentoring outcomes. The researcher hypothesized that the number of assigned teachers to every mentor might significantly impact mentors' ability to deal with many new teachers due to the scarcity of frequent interaction. Rockoff (2008) emphasized that "caseload must have a negative effect on mentor service quality at some point" (p. 21).

Program quality is critically tied to the strength of the mentor-mentee relationship that is formed based on their communication over a period of time, which can also fluctuate based on the duration of mentorship (Allen & Eby, 2003). The degree of program formality plays a vital role in forming an effective relationship. Allen and Eby (2003) found that learning benefits were tied to mentoring quality, and also that

"mentorship type was not directly related to mentorship effectiveness, but it did interact with mentorship duration [that was significantly related] to mentorship effectiveness for formal mentors" (p. 481). Also, Desimone et al. (2104) found informal programs can have a greater influence on the interaction frequency because "novice teachers spent more time interacting with their informal mentor" (p. 96).

In terms of caseload, which may impact mentors' effectiveness, Fletcher and Strong (2009) examined the impact of two different mentoring-program options known as *full-release* and *site-based mentoring programs* on new teachers' effectiveness, measured by student achievement gains. The main difference between the two options is that the full-release consists of mentors who were released from school duties whereas mentors in site-based mentoring had other duties of teaching. Fletcher and Strong suggested a significant difference between students' achievements based on the associated mentors. The study concluded that full-release mentors had greater impacts on mentees. However, studies documented that mentors who teach in the same school would increase the opportunities for frequent mentor–mentee interaction (Desimone et al, 2014) and contribute to mentoring relationships (Kilburg & Hancock, 2006). Interestingly, though, Goldrick et al. (2012) indicated that there are "at least ten states [that] prohibit full-time mentors by restricting mentors from working with more than one-to-three beginning teachers at a time" (p. 13). Various mentoring programs exist amongst states, with different policies, construction, and implementation.

Jonson (2002) emphasized that mentor–mentee relationships differ based on mentors' understanding and ability to develop appropriate relationships, which can help beginning teachers overcome their struggles and be more willing to further involve

themselves in new practices and creative instructional ideas. Because novice teachers undergo a formative process (Feiman-Nemser, 2001), they need more encouragement and motivation to jettison their fears of failure. Furthermore, over-criticism and uncertainty of mentor–mentee relationships can result in critical issues of inhibiting mentees' progress because "new teachers will be concerned primarily with gaining the favor of the mentor and avoiding criticism" (Jonson, 2002, p. 24). However, Roehrig, Bohm, Turner, and Pressley (2008) concluded the importance of being "open to critiques and suggestions, and [being able] to have sufficient self-reflective, metacognitive skills to process, contemplate, and use the information provided" (p. 700). This would imply that these relationships should focus on the benefits of the interactions with more openness and positive feedback.

Novice Teachers' Satisfaction with Mentorship

Lyons and Oppler (2004) examined the impact of some selected variables on beginning teachers' satisfaction. They found that "the characteristics of [mentees'] job, mentor, and organizational support" are indicators of their satisfaction (p. 226). More significantly, they also found that frequent interaction could increase novice teachers' satisfaction with their mentoring programs. Mentees' satisfaction with their mentoring programs is related to their relationship with their mentors and the program characteristics and elements.

Greiman (2007) conducted a study on novice teachers and their mentors to examine the dyad satisfaction of their mentoring relationship. The study found a relationship between novice teachers and their mentors in regards to dyad satisfaction, but the study reported a disparate perception of how mentors and new teachers perceive

mentoring functions, regarding the psychosocial functions where novices believe that they receive less psychosocial support compared to their mentors. This gap between mentors and novice teachers' perceptions of mentoring support can have an impact on how they value the mentoring program effectiveness and their assigned mentors to respond to their teaching context. Greiman confirmed that novice teachers tend to report high dyad satisfaction based on the intensive support they receive from their mentors. This would lead one to confirm Xu and Payne's (2014) statement that mentoring satisfaction can mediate mentees' perception on their relationship with their assigned mentors. In terms of mentors' satisfaction, Hobson et al. (2009) reported in their reviews that mentors are generally satisfied with their mentoring role where they can "see… their mentees succeed and progress and noticing evidence of their own impact on mentees' development and their teaching" (p. 210). Jaspers, Meijer, Pins, and Wubbels (2014) explored mentor teachers' perceptions on their roles of combining mentoring and teaching tasks in their schools, which mentoring can reinforce their positive feeling and satisfaction in the profession.

Hobson et al. (2009) argued that mentees' willingness to participate in mentoring programs is still undiscovered. This issue can raise further needs for exploring the extent of novice teachers' desires to participate in mentoring programs, which can reflect on their degree of perceived satisfaction. Further studies about mentees' satisfaction and its impacts on mentoring outcomes can provide significant findings to educational institutions and schools.

Mentor Matches

Mentor matches are a critical concern in mentoring structure and effectiveness, yet there is still less attention paid to the importance of matching mentors and mentees (Lloyd, Wood, & Moreno, 2000). Despite the importance of mentor matches, there is limited research that discussed the influence of mentor matches on mentoring outcomes. Gagen and Bowie (2005) mentioned that the matching process should consider "subject areas, situations, and even personality" (p. 41). In some cases, matches may not be a choice, especially when it comes to the personal characteristics that are difficult to be identified or mandated. Thus, mentors should be trained to understand the importance of personal styles of teaching strategies and communications. Mentors can avoid these personal differences from hindering their support to novice teachers when they receive adequate preparation to apply different ideas and strategies in various instances with diverse teachers (Gagen & Bowie).

Related to the nature of subjects' differences, mentor–mentee subject matches become critical in mentoring programs. A study (Kardos & Johnson, 2010) conducted in three different states (Florida, Massachusetts, and Michigan) revealed more than half of new teachers (68 percent) were assigned to mentors who existed in the same school, but there were approximately 50 percent of new teachers assigned to mentors who teach different subjects and 44 percent of mentors who teach the same grade level. More significant, Kardos and Johnson incorporated Smith and Ingersoll's (2004) finding that emphasized the influence of increasing new teachers' retention by assigning them to mentors who teach the same subject. The subjects' differences among disciplines may reduce the chances of exchanging specific ideas and sharing common issues. Rockoff

(2008) found there was a possible influence on student math achievement when their teachers were assigned to mentors from the same content areas, but he indicated "that [he did] not find much evidence that having a mentor whose area of subject matter expertise matches a teacher's subject is associated with better outcomes" (p. 34). Notably, LoCasale-Crouch et al. (2012) found novice teachers who were assigned to mentors teaching the same content areas and grade levels had positive attitudes towards their mentoring support they received.

Therefore, to ensure that novice teachers receive significant assistance, it is critical to examine the influence of mentoring matches on mentoring desired outcomes. For example, investigating the impact of mentors matches who teach the same content areas and grade level and exist in the same school, on mentoring processes are crucial when examining the relationship between mentoring relationship quality, mentoring satisfaction, and novice teachers' self-efficacy. Because mentor matches can be a mediator of mentoring relationship quality and satisfaction, this study proceeded to further examine its contributions to novice teachers' self-efficacy.

Mentor Selection

Mentor selection is crucial to help novice teachers succeed. Ganser et al. (1998) emphasized that "mentor selection is often critical to a program's success" (p. 10). With the emphasis of mentoring importance to guide novice teachers, mentors are the heart of mentoring effectiveness (Callahan, 2016). Stansbury and Zimmerman (2000) emphasized that mentor selection is challenging because qualified and experienced teachers may not be able to supervise new teachers, which complicates the need for finding qualified teachers who can skillfully provide adequate assistance for novices. Saying that,

researchers believed that mentor selection is the essential process to strengthen the mentoring quality and effectiveness (Ganser, 1991). Kardos and Johnson (2010) discussed the importance of mentors' characteristics that can impact their working duties and experience to interact effectively with novice teachers. Kardos and Johnson examined the proportions of newly-mentored teachers and mentors' matching characteristics, including the existence in the same school, teaching the same grade level, and specializing in the same content areas.

These characteristics can increase the impact on mentoring programs' effectiveness and their importance to support novice teachers, which leads researchers to yield the necessity of focusing on the mentors' selection and matching. Washburn-Moses (2010) mentioned that mentor selection is a vital shortcoming of many existing studies that examined the effectiveness of mentoring programs, because these studies did not control for the mentor selection and characteristics that can have a huge impact on mentoring influence. Corresponding to researchers' concern of mentor selection impact on mentoring outcomes (Washburn-Mases, 2010; Ingersoll & Kralik, 2004), the current study accounts for the importance of mentor matches that can have a potential impact on mentoring novice teachers.

Mentor Training

To help mentors understand their roles and provide them with adequate skills is crucial (Aspfors & Fransson, 2015). Ganser et al. (1998) emphasized that mentor training should focus on the requisite skills such as "questioning strategies, listening skills, classroom observation, and conferencing" (p. 14). Providing mentors with appropriate knowledge to interact with their mentees can ease and direct mentors' efforts and

effectiveness. Mentor training can vary among states and districts based on the program policies. Goldrick (2016) found "more than 30 states provide or require initial mentor training, but only 18 also require ongoing professional development for mentors" (p. v). Goldrick indicated that many mentoring programs across most states paid less attention to specific elements of mentor training, yet there are a "few states … articulate specific training elements include such components as: knowledge of state teaching standards, formative assessment of new teacher performance, classroom observation, reflective conversations, and adult learning theory" (p. 13). Mentors need to develop their mentoring skills and keep updated of their challenging roles to provide appropriate assistance to novice teachers (Hirsch et al., 2009; Stansbury & Zimmerman, 2000).

The importance of mentors' characteristics stems from the influence of their ability to provide significant assistance to novice teachers. Haas (2012) felt that mentor quality plays a significant role in teachers' retention, which increases the demand on the importance of mentors' training and preparation to equip them with adequate skills. Rowley (1999) discussed possible characteristics mentors should have, including commitment to the mentoring process, recognition of novice teachers' needs, experience of teaching practices, understanding of individual's differences and uniqueness, and positive attitudes towards the profession.

Mentoring Programs across the Nation

Since the mentoring movement's conception of mentoring novice teachers' decades ago, mentoring programs have become an educational norm and have expanded among states. According to Darling-Hammond (2003), there were seven states that provided mentoring induction programs from 1996–1997, and this number increased to

include 33 states in 2002. In 2008, approximately 80% of new teachers had a mentor during their teaching transition in schools, but there were variations in participation levels in mentorship programs based on schools' demographics and mentoring polices and aims. The likelihood of teachers' participation in mentoring programs in schools with low-income and minority students is low (Darling-Hammond & Adamson, 2010). Goldrick (2016) conducted a study review on all 50 state-mentoring policies and implementations, which showed promising practices of adapting mentoring programs into educational settings. Nonetheless, the report revealed that "states have made only limited progress over the past several years" (Goldrick, 2016, p. i).

Mentoring Program in a Midwestern State

The Teacher Support System is a mentoring program in a Midwestern State and is the subject of this study. The program was designed to support new teachers' skills in their beginning careers. According to the Teacher Support System (2015), the program's goal is designed "to develop teachers who are thinkers and problem-solvers, who ask questions about their practice, and constantly seek solutions, who are committed and passionate advocates for learning for all children." Specifically, the program targets new teachers in public schools across the state, which is mandated for those newly hired teachers with no previous teaching experience. The program offers various kinds of assistance for novice teachers and their mentors.

Novice Teachers

Novice teachers who are in the first year of their teaching journey are required to participate in the Teacher Support System. The primary focus of this designed program is to maintain one-on-one conferences that require teachers to spend 30 hours with their

mentors throughout the period of mentorship. The program requires novice teachers to become involved in three different kinds of observations: undergo observation by mentors, reflect on their recorded classrooms, and become involved in observing other colleagues' classrooms. Also, there is an online course that provides further theoretical knowledge to novice teachers, which is optional (Teacher Support System, 2015). The program conceptualizes the cycle of problem solving to guide the mentoring process. This cycle consists of four areas as they appear in Figure 2.

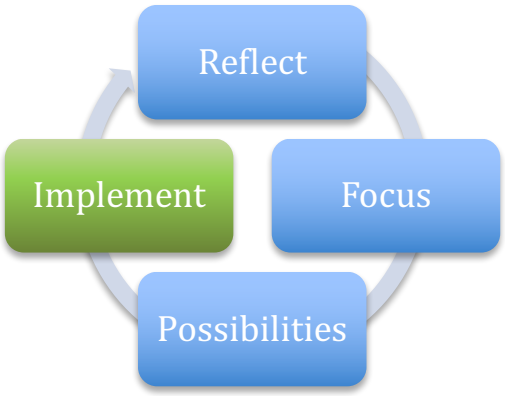

Figure 2. Cycle of Problem Solving to Construct Mentor-Teacher Interaction (Stenehjem, 2014)

This figure shows the mentoring process and how novice teachers interact with their mentors to develop their performance and solve possible issues that can arise during the teaching practices. The purpose of this cycle is to help novice teachers and their mentors to organize their work and conferencing time in a professional and coherent way that allows them to track their concerns and improvement. This process can help them become more reflective practitioners and more independent problem solvers (Stenehjem, 2014). The first step is to reflect on what is of concern to a novice teacher's practices. This can allow for novice teachers to bring their questions and to discuss with their mentors any concerns they may have noted and to seek improvement. Then, first-year

teachers would focus on discussing the issues or concerns during their conference times. This essentially can lead to exploring the importance of how mentees used their mentoring program in an effective way to support their learning and needs. The third step is to find possible ways to cope with their concerns or questions; therefore, with a mentor's assistance, a teacher can build possible plans to deal with their concerns and practices. The final step in the cycle is to implement what they learned from the conference, which can lead them to repeat the cycle (Stenehjem, 2014).

Mentor Selection and Training

Mentors are assigned based on their teaching experience and willingness to participate in the program. The program provides principals with some recommended guidelines for selecting mentors. These guidelines focus on matching full-time classroom teachers with one novice teacher, aiming to assign mentors from the same school, district, or close location and having similar teaching duties. Also, there are five criteria administrators are suggested to consider, including "strong interpersonal skills, credibility with peers and administrators, a demonstrated curiosity and eagerness to learn, respect for multiple perspectives, and outstanding instructional practices" (Teacher Support System, 2015). The administrators could also follow these other guidelines for selecting mentors, in which "the good mentor is committed to the role of mentoring, accepting of the beginning teacher, skilled at providing instructional support, effective in different interpersonal contexts, a model of a continuous learner, [and] communicates hope and optimism" (Teacher Support System, 2015). Once administrators make the selection, they notify those selected individuals if they are willing to participate in mentoring new coming teachers (L. Stenehjem, personal communication, March 3, 2017).

Mentors get paid 800 dollars each semester when they complete all the program duties, including the requirements of mentoring training, 15 hours per semester of one-on-one conferences with novice teachers, and three observations of novice teachers every semester. They are required to participate in mentoring training that varies according to their previous mentoring experiences. The training focuses on communication skills, problem-solving techniques, and novice teachers' needs. The program has a procedure established for training mentors. New mentors need to attend an initial training for 2 days before or at the beginning of the school year (Teacher Support System, 2015). In the following years, they attend a half-day seminar in October that focuses on their reflections on previous mentoring experiences. They discuss obstacles and share ideas that contribute to their continued learning and understanding of the mentoring process.

Meanwhile, there is an online course that is run simultaneously with mentor training, and it has three different parts. Every part of the training takes a year, so "mentors take a course called Observing and Conferencing in the first year, followed by the second part, Using Data to Improve Instruction, and the final part, Designing Effective Lessons" (L. Stenehjem, personal communication, March 3, 2017).

Summary

This chapter discussed various aspects of self-efficacy importance, sources, measurements' construction, and possible mentorship connection to self-efficacy. In addition, there is a nationwide discussion about the significance of increasing the construction and quality of mentoring programs. With the fact that mentoring programs have increased with various implementation, there is a consideration on interaction quality and mentors' characteristics. In this chapter, I attempted to detail what has been

achieved in regards to novice teachers' self-efficacy, novice teachers' needs, mentoring relationship quality, satisfaction process, and mentor matches and characteristics. I also provided an introduction to the Teacher Support System in a Midwestern State where the study was conducted.

The next chapter details the study methodology. I discussed participants' recruitment, measurements, data collection, and analysis procedures. It also highlights the validity, reliability, trustworthiness, and credibility procedures.

CHAPTER III

RESEARCH METHODS

Introduction

This study used a mixed methodology with a primary quantitative analysis to investigate the relationship between the study variables, including mentoring relationship quality, satisfaction, and mentor matches on novice teachers' self-efficacy. It continued to explore the teachers' perceptions of their mentoring quality and connection to their personal and professional development. The study started with the quantitative phase that focused on exploring the correlations between variables and the level of impacts of these variables on teachers' self-efficacy. Next, a qualitative phase followed to explore teachers' perceptions and attitudes on these variables to provide further understanding of the impact of teachers' job satisfaction on teachers' efficacy and professional development as lifelong learners. Qualitative data can strengthen the study validity and reliability and provide distinct exploration. Creswell (2012) indicated that mixed methods help to "provides better understanding of your research problem than other by itself" (p.535), which also strengthen the study.

The design of this study ensured another purpose for using mixed methods that was identified by Greene, Caracelli, and Graham (1989), which focuses on *expansion*, which can help "extend the breadth and range of the study" (p.259). The methodology and research design focused primarily on quantitative data and sought a qualitative understanding of novice teachers' perception of their mentoring quality and

support. Therefore, the following sections highlight the study questions and the design phases based on following these formats: quantitative analysis as a primary research function and qualitative analysis as a supporting phase to provide a distinct related explanation. These formats include mentoring program features, mentoring support and novice teachers' needs, and challenges of working conditions.

Research Questions

Quantitative Questions

This study consists of three main questions:

1. What is the relationship between mentoring relationship quality and novice teachers' self-efficacy?
2. What is the relationship between mentoring satisfaction and novice teachers' self-efficacy?
3. In what ways do mentor matches make a difference in terms of mentoring relationship quality, satisfaction, and self-efficacy?

Qualitative Survey Questions

These questions were incorporated into the survey:

1. Please describe the most valuable features of the mentoring program. Why?
2. Overall, does your mentoring program meet your needs as a growing professional? Why or Why not?
3. At your site, what are the most challenging working conditions? Please be specific.

Quantitative Phase

Because this study focused on discovering the relationship between several variables, a correlational design is an appropriate approach to examine and determine the relationships between the investigated variables. The correlational design helped to measure the significance, strength, and direction of this relationship (Creswell, 2012). Related to the various implementations of the mentoring program, the essence of this study focused on discovering possible relationships among investigated variables such as mentoring quality of relationship, satisfaction, mentor matches, and novice teachers' self-efficacy.

Participants

I used convenience sampling, which is known as a non-probability sample (Creswell, 2009). The participants were recruited from mentoring program that is designed for K-12 first year teachers in public schools of a Midwestern State. Novice teachers have less than one year of experience, so the study strictly looked for teachers who were in the first year of teaching experience. The study sought data in the end of the second semester when novice teachers were almost finished with their first-year experience. The idea behind this procedure was to allow for an appropriate period of mentoring and supervising novice teachers that can possibly reflect the impact of the mentoring program.

The study recruited approximately 340 novice teachers with a return rate of 49.7 percent. The final number of participants was 169 novice teachers who submitted the survey with 138 participants who finished the survey. Non and partial responses were expected and reported, which were as follows: 16 respondents had no responses, 5

finished the demographics parts, 148 completed the mentoring relationship quality, 143 completed the satisfaction scale, and 138 completed the self-efficacy scale, with two participants who missed two items. The analysis was conducted on 148 participants (43.5%), including those who provided partial responses. In regards to qualitative questions, there were 107, 105, 102 narrative responses for the first, second, and third question respectively. Those teachers were asked to voluntarily fill out a designed survey that was available as an online platform called Qualtrics where the data was stored and later downloaded for analyses. The recruitment included teachers across different demographic areas and grade levels.

Procedures

After receiving the Institutional Review Board (IRB) approval, the online survey link was distributed through the mentoring program coordinator to all participants. The coordinator was the monitoring and supervising agent for the program across the state. Participants were informed about the study purpose and the procedure of the study. During the data collection, the coordinator and I followed up with three weekly reminders to the participants to encourage them to complete the survey. After collecting the data, I downloaded the responses and sorted them into quantitative and qualitative data for analysis.

Measurements

The survey of this study was adapted and developed to measure the investigated variables. I incorporated the most used and evaluated scales that were used in single or multiple studies. The changes and modifications are all addressed. The following sections explain the specific measurements and their operationalized items. Also, these sections

present the construction of the study survey. A copy of the survey can be found in Appendix C.

Demographics

Demographics consisted of four items to gather background information about mentees, including the participant's gender, grade levels, age, and community demographics, which were based on the community population that the school resides in. They included less than 500, 501-5,000, 5,001-10,000, and more than 10,000.

Mentor Matches

Mentor matches were three items that asked mentees whether their mentors teach or work in the same school, teach the same content area(s), and teach the same grade level(s). The questions were: "Does your mentor work in the same school?", "Does your mentor teach any of the same content areas?", and "Does your mentor teach the same grade level(s)?" These questions were important for examining mentor matches' impacts on mentoring relationship quality, mentoring satisfaction, and novice teachers' self-efficacy. In addition, these questions were used for controlling purposes when analyzing the relationship between the investigated variables.

Mentoring Relationships Quality

Five items were adapted to measure the effectiveness of mentor–mentee relationships and the overall effectiveness of the mentoring program, which operationalized mentors' relationship quality. These items were adapted from Xu and Payne's (2014) mentorship quality scale. Xu and Payne borrowed and modified Allen and Eby's (2003) mentorship quality scale. The items were as follows: "My mentor and I have benefited from our relationship," "I have effectively used mentoring," and "I have

enjoyed high quality mentoring relationship." Two other items were created for the purpose of this study: "My mentor and I have frequent meetings and interactions (about once a week)," and "I feel my teaching skills have improved because of the mentoring program." This scale was assessed on a 5-point Likert scale (1 = *strongly disagree*, 2 = *disagree*, 3 = *neutral*, 4 = *agree*, and 5 = *strongly agree*).

Satisfaction with the Mentoring Program

Satisfaction with the mentoring program was measured with eleven items. Three items were borrowed from Xu and Payne (2014), who adapted and modified Ragins et al.'s (2000) satisfaction scale. This adapted scale operationalized the degree of mentee's satisfaction (e.g., "I am/have been satisfied with my mentoring," "Mentoring has disappointed me," and "Mentoring has failed to meet my needs" p. 513). Also, another six items were developed by Lyons and Oppler (2004) to measure mentees' perceptions of their satisfaction with their assigned mentors. An example of these items includes "I am satisfied with the mentor that I was assigned" (p. 223). Two items were created based on survey validity and committee reviews ("my mentor understands my teaching context" and "my mentor's personality matched well with mine"). A 5-point Likert scale was used (1 = *strongly disagree*, progressing to 5 = *strongly agree*).

Novice Teachers' Self-Efficacy

The perceived self-efficacy scale consisted of nine adapted items that were developed by Schwarzer, Schmitz, and Daytner (1999) to measure teachers' self-efficacy. Many studies used the same scale to measure teachers' self-efficacy (e.g., Holzberger, Philipp, & Kunter, 2014; Öztas & Dilmac, 2009; Rusu, Copaci, & Soos, 2015; Wepner et al., 2009). An example of the scale items includes "I am convinced that I am able to

successfully teach all relevant subject content to even the most difficult students." This scale was assessed on a 4-point Likert scale (1 = *not at all true*, 2 = *barely true*, 3 = *moderately true,* and 4 = *exactly true*). Also, this scale response format is still valid and similar to the 5-point Likert scale in terms of reliability and distribution (Lee & Paek, 2014). A copy of the scales is in Appendix C.

Dealing with Measurement Errors

Measurement errors in research designs are expected, which require further effort to identify and evaluate them because these measurement errors can later impact the data collection, analysis, and conclusion. Measurement errors are connected to study validity and reliability (Viswanathan, 2005), so identifying errors in advance can help avoid unexpected issues in the study design that may attenuate variable correlational relationships or increase the risk of incorrect analysis and conclusion. For this study, there were three different measurement errors that need more precautions. These measurement errors include *additive systematic error* that is related but not limited to item construction, *correlational systematic error within measures* that is related to responses format, and *correlational systematic error across measures* that stems from the nature of the measured variable, which this error is influenced by individuals' moods (Viswanathan, 2005, p. 142).

Additive systematic error is concerned with the distance between the true value and measured value, which impacts the consistency when the measure has construct issues (Viswanathan, 2005). The adapted measurements were evaluated carefully to ensure that they would align with the conceptualization of the investigated variables. For example, Xu and Payne (2014) adapted three items to measure the mentorship quality.

This leads to further consideration to use this measure because the three items may inhibit my ability to assess the internal dimensional consistency. Notwithstanding, "additive systematic error can be constant across responses and therefore, have no relationships" (Viswanathan, 2005, p. 106). Item construction and clarity are fundamental to avoid this type of error. For the purpose of this study to ensure it is not subjected to the consequence of this error, two items were created to increase the chance of avoiding additive systematic error that can result in increasing the distance between the actual scores and error scores. These items include: "My mentor and I have frequent meetings and interactions (about once a week)," and "I feel my teaching skills have improved because of the mentoring program." This process can also help avoid the correlational systematic error within and across the measure (Viswanathan, 2005).

Correlational systematic error is also problematic and can occur within and across measures (Viswanathan, 2010). To avoid this type of error, I attempted to carefully focus on the response point, for which the 5-point Likert scale is used in these measures, including mentoring relationship quality and satisfaction. The 5-point Likert scale is considered the most common response format appropriate for reliability coefficients and variable distribution (Lozano, Garcia-Cueto, & Munia, 2008), but caution is required when the scale has few items (Lee & Paek, 2014). To avoid this error, I followed Viswanathan's (2005) recommendation who emphasized the importance of avoiding redundancy and wording issues. Thus, I conducted several reviews of scales' items.

Validity and Reliability

Validity and reliability were important components in the research that require more considerations (Bernard, 2000). According to Warner (2013), validity refers to how

much the measurements can provide valid scores and information about particular variables that I intended to measure, since "validity is generally more difficult to assess than reliability" (p. 902). In addition, I examined the scales' reliability to ensure that items were consistent and correlated. Even though validity and reliability seem overlapped, they have different considerations and functions. Reliability was critical for consistency, but it "could have nothing to do with the accuracy in measurement" (Viswanathan, 2005, p. 4). The following sections contain detailed plans regarding how validity and reliability were tested in this study.

Controls for Threats to Validity

Internal Validity

Internal validity is related to "any relationship between two or more variables [that] should be unambiguous as to what it means rather than being due to [other factors] such as age or ability of subject…" (Freankel & Wallen, 1996, p. 242). In order to ensure a high-quality study, I examined related aspects of this correlational study, including the participants' demographics and mentor matches.

Participant characteristics. *Participant characteristics* can create a threat to the validity of this study. For example, there are variables such as school demographics and participant gender that can impact novice teachers' self-efficacy. Novice teachers' self-efficacy is likely to be influenced by other factors such as gender, grades taught, community demographics, and mentor's status. To control for these confounding variables, the study examined their impacts on the investigated variables to avoid Type I or II errors and to provide further understanding of their influence on the investigated variables.

Mortality. In correlational design, the impact of mortality—the number of participants who drop out (i.e., the "lost") did not have a high impact on the internal validity, since I needed to exclude the lost responses (Freankel & Wallen, 1996). However, the issue of mortality may influence the correlational relationship, but it has more impact on the external validity (Freankel & Wallen). To deal with this issue, I tried to (a) administer the survey in reasonable time and (b) to follow up with weekly reminders.

External Validity

External validity is related to the generalizability process. Because the number of participants controls the generalizability, more than 100 novice teachers were recruited to participate in this study. As indicated, I attempted to avoid the participant lost by weekly and kindly reminders that encouraged them to submit their responses. With the reminders, the responses increased by approximately 40 participants. This process helped increase the external validity. In this study, the number of participants was 148, which could strengthen the correlational analysis. Creswell, (2012) and Freankel and Wallen (1996) emphasized that the participants' number in correlational analysis should not be lower than 30 participants.

Control for Threats to Reliability

As indicated earlier, the reliability is related to score consistency (Freankel & Wallen, 1996; Warner, 2013). The adapted instruments could increase the prediction of scales reliability because these measurements showed high consistent responses and reliability based on Cronbach Alpha. However, this process and previous use of these measurements are not enough to validate its reliability because new changes and

modification of instruments need reestablishment of reliability and validity (Creswell, 2009). To increase the likelihood of measurement reliability in this study, the adapted scales were built on multiple items and responses such as increasing the scale items and use of the 5-point Likert scale.

These procedures were used to ensure collection of high-quality data. I used the precaution of validity and reliability during the data collection, analysis, and conclusion. After collecting the data, it was screened and Cronbach's Alpha was identified to evaluate the reliability, using George and Mallery's (2011) identification of reliability scores. George and Mallery tried to detail the coefficient range of Cronbach's Alpha, using these rules of thumb:

- $\alpha > .9$ – excellent
- $\alpha > .8$ – good
- $\alpha > .7$ – acceptable
- $\alpha > .6$ – questionable
- $\alpha > .5$ – poor
- $\alpha < .5$ – unacceptable (p. 231).

Qualitative Phase

This study used three open-ended questions to investigate teachers' perceptions on their mentoring program and support. These questions were developed to explore factors that contributed to the mentoring program's features, mentoring support and novice teachers' needs, and challenges of working conditions. This was an extension of collected data, which was incorporated into the survey. Participants were able to provide short written responses to every question, which later were coded and categorized to

identify emerging themes. Participants and procedures were detailed in the previous quantitative sections. These qualitative questions included:

1. Please describe the most valuable features of the mentoring program. Why?
2. Overall, does your mentoring program meet your needs as a growing professional? Why or Why not?
3. At your site, what are the most challenging working conditions? Please be specific.

Trustworthiness and Credibility

This study used a primarily quantitative approach to investigate the relationship between mentoring relationship quality, satisfaction, mentor matches, and novice teachers' self-efficacy. The study was extended to include qualitative questions that provided further understanding of teaching context and mentoring effectiveness. Various techniques were used to ensure the study's trustworthiness and credibility. The overriding qualitative questions were attached in the survey that was distributed randomly to participants. Random selection can help eliminate my bias to select specific participants (Shenton, 2004). Also, the number of responses could provide significant support to the study's credibility.

Analysis Procedures

Quantitative Analysis

After downloading the data, the quantitative data was transferred into the Statistical Package for the Social Sciences (SPSS) document because SPSS "is a computer program that performs most of the statistical calculations" (Gravetter & Wallnau, 2010, p. 32). The analysis started by screening the data, recording and reversing

the necessary variables. In this study survey, two items needed to be reversed on the scale of mentorship satisfaction, including "mentoring has disappointed me" and "mentoring has failed to meet my needs." One of the important steps at the beginning of this analysis was to identify outliers and check instruments' reliability and validity. Then, I proceeded to the main analysis. The following headings present all possible analysis procedures. The Listwise procedure in SPSS to eliminate any missing data was used. Therefore, the interpretation was conducted on completed responses only.

Variable Descriptions

In this analysis, variable descriptions were conducted to check the study's normality and identify outliers and abnormal responses that may later impact the analysis procedures. Warner (2013) mentioned that "real datasets often contain errors, inconsistencies in responses or measurements, outliers, and missing values" (p. 125). In order to avoid misinterpretation and testing errors, I screened the data to identify any possible problems before the analysis, which allowed me to address and fix any possible problems such as missing data, outliers, or unrelated items.

Measurement Reliability

When multiple-item scales are used, a reliability check is crucial to ensure internal consistency. In order to assess scale reliability, Cronbach's Alpha (α) was used because it is the most used measure for internal consistency, which can range between 0 and 1. The reliability check was conducted before any test or analysis procedure to ensure that the scale items were constructed to measure the specific areas. Also, a significant correlation among multi-scale items was considered because it helped examine the items' relatedness and connection (Tavakol & Dennick, 2011). It is noteworthy that Tavakol and

Dennick distinguished between alpha and correlation values, stating that "if the items in a test are correlated to each other, the value of alpha is increased. However, a high coefficient alpha does not always mean a high degree of internal consistency" (Tavakol & Dennick, 2011, p. 53). All reliability checks are detailed in the results section.

Factor Analysis

Factor analysis has increasingly become a popular process in data analysis (George & Mallery, 2001). I conducted factor analysis for two reasons that Thompson (2004) discussed. First, it was used to check scale validity. As an illustration, scale validly is a critical aspect of measuring what is supposed to be measured. Second, factor analysis helped me validate the construction of the used scale and reduce the number of items in mentoring satisfaction because two items seemed unrelated. More details are provided in the results section.

Correlation

Correlation was used to test the relationships between the investigated variables that can show various connection, strengths, and influence between these variables (Creswell, 2012). It is noteworthy that the correlational value can range between -1.00 and +1.00; either value can determine an existing relationship, but the direction is based on a positive or negative value. When r = 0.00, a correlation does not exist between the variables. Also, a value lower than r = 0.20 is very weak and a strong correlation should exceed r = 0.86 (Creswell, 2012). This correlational statistic focused on testing the relationship between investigated variables. Also, a Bonferroni Adjustment was used in this analysis to determine the variable significant correlation and avoid false interpretation.

Independent t-Test

Independent t test was used to examine the impact of gender and mentors matches on mentoring relationship quality, mentoring satisfaction, and novice teachers' self-efficacy.

One Way Analysis (ANOVA)

ANOVA was used to examine the relationship between groups based on their means. The study examined the impact of community demographics sorted by population into four categories on the investigated variables. These categories included communities that range around 500, from 501-5,000, 5,001-10,000, and more than 10,000.

Qualitative Analysis

I used general procedures that were suggested by Creswell (2012). These procedures emphasized that the analysis required to "make sense out of text data, divide it into text or image segments, label the segments with codes, examine codes for overlap and redundancy, and collapse these codes into broad themes" (p. 243). All responses were sorted according to questions into Excel sheets to organize and facilitate the analysis. After collecting all possible statements in the Excel document, I coded and categorized these statements and placed them into sequential columns of codes, categories, themes, and, assertions for backward analysis purposes. The analysis focused on the repetitions, similarities, and differences of the collected statements. Following headings describes qualitative analysis procedures.

Codes

Codes were used to reduce participants' responses into significant statements and short descriptions. This required me to read and identify the similarities and differences

among these responses. The codes were related to what participants emphasized, which include similar responses and agreements. Because the number of participants' responses exceeded one hundred per question, there was an increase on the agreements among them, and multiple ideas were presented.

Categories

Categories were identified based on the reduction process to identify related codes to reduce them into specific categories. This procedure helped me to reduce the redundancy among responses and identify the agreements among participants' ideas.

Themes

After categorizing the responses for eliminating redundancies and reducing the codes, I sorted these categories into broad themes that represent broad topics. As described by Creswell (2012), "themes … are similar codes aggregated together to form a major idea in the database" (p. 245).

Qualitative Report

A qualitative report was used to present emerging themes. Because the analysis was done separately on each question, the report sorted the findings into three different topics by questions, including mentoring program features, mentoring program support and novice teachers' needs, and challenges of working conditions. Then, I discussed the findings of participants' responses using the identified themes and backward analysis to support these findings.

Summary

This chapter discussed the current study methodology, including both the quantitative and qualitative phases. The quantitative phase included a description of data

collection, participants' demographics, procedures, measurements, validity and reliability discussion. A correlational design was used to frame the study. Also, a description of qualitative procedures, data collection, and trustworthiness and credibility was provided. Data was collected through an online survey and analyzed based on both of this quantitative and qualitative data. A description of quantitative and qualitative analyses procedures was provided.

The next chapter has detailed findings of the survey analysis. The analysis includes the process of data screening, reliability, factor analysis, and correlational analysis, independent *t* test, and one way ANOVA, followed by the qualitative report.

CHAPTER IV

RESULTS

Introduction

This chapter is divided into a detailed analysis of quantitative and qualitative data. Because the study used a mixed methodology, participants' demographics, data screening, and factor analysis are presented before the main quantitative and qualitative analysis for each section.

Quantitative Questions

This study consists of three overriding main questions:

1. What is the relationship between mentoring relationship quality based on the mentor-mentee relationship and novice teachers' self-efficacy?
2. What is the relationship between mentoring satisfaction and novice teachers' self-efficacy?
3. In what ways do mentor matches make a difference in terms of mentoring relationship quality, satisfaction, and novice teachers' self-efficacy?

Qualitative Survey Questions

The following narrative questions were incorporated in the survey:

1. Please describe the most valuable features of the mentoring program. Why?
2. Overall, does your mentoring program meet your needs as a growing professional? Why or Why not?

3. At your site, what are the most challenging working conditions? Please be specific.

Participants' Demographics

Novice teachers' demographic information can be found in table 1, which includes participants' gender, age, and teaching assignment. All participants are considered first year teachers. There were 84.6% female (N = 115) and 15.4% male participants (N = 21). Participants' ages ranged from 22 to 49 years old with 35 unknowns. Participants were assigned to teach one grade or multiple grades. Grade assignments ranged from all four grades (kindergarten, elementary, middle, and high school) to three, two, or one grade assigned (3, 3, 13, and 119, respectively). This means the number of novice teachers who teach one grade level only was the highest.

Table 1. Summary of Novice Teachers' Demographic Information.

Demographic Variables	Types	Total Number	Percent	Valid Percent
Gender	Male	21	15.4	15.4
	Female	115	84.6	84.6
Age	20-25	60	43.8	58.8
	26-30	21	15.3	20.6
	31-35	9	6.6	8.8
	Over 36	12	8.8	11.8
	Unknown	35	25.5	--

Table 1. cont.

Demographic Variables	Types	Total Number	Percent	Valid Percent
Teaching Assignments	All grades	3	2.18	--
	Three Grades	3	2.18	--
	Two Grades	13	9.48	--
	One Grade	118	86.8	--

Also, the recruitment includes different school demographics. These demographics represent the population of communities, which ranges from less than 500 to over 10,000 people. Table 2 presents school demographic information.

Table 2. Summary of Community Demographics.

School Demographics	Total Number	Percent	Valid Percent
Less than 500	20	14.7	14.8
500 – 5,000	46	33.8	34.6
5,001 – 10,0000	7	5.1	5.2
Over 10,000	62	45.6	45.9
Missing	1	.7	--
Total	136	100	100

Mentors Matches

Mentor matches in this study refers to three components of mentors' status, including teaching or working in the same school, specializing in the same content, and teaching the same grade levels. The analysis showed that there were disparities among

mentor matches. For example, there were 117 (86 percent) novice teachers who indicated that their mentors teach or work in the same school, while 19 (14 percent) of novice teachers whose mentors were not in the school. In addition, there were 96 (70.6 percent) of novice teachers whose mentors were teaching the same content while 40 (29.4 percent) were teaching different content areas. The final match was related to teaching the same grade levels, which had low matches among novice teachers. The results revealed that there were 84 (61.8 percent) novice teachers who had their mentors teaching the same grade level versus 52 (38.2 percent) novice teachers whose mentors were in another grade level. See table 3.

Table 3. Summary of Mentor Matches Reported by their Mentees.

Type of Mentor Matches	Actual Number		Percentage	
	Matches	Non-Matches	Matches	Non-Matches
By School	117	19	86	14
By Content Areas	96	40	70.6	29.4
By Grade Level(s)	84	52	61.8	38.2

Quantitative Analysis

Validity Check

Factor analysis. Factor analysis was conducted to examine the scales validity and explore unrelated items (Thompson, 2004). It explored the factor loading of the items and the correlational relationships on how these measures should test the intended outcomes. The analysis was conducted on three different scales. The first analysis was related to mentoring relationship quality. The result indicated that factor loading of communalities

ranged between .72 and .87, which were high. By examining the scree plot of individual items loading, the scale presents one intended factor: mentoring relationship quality. Table 4 presents a summary of factor analysis results for mentoring relationship quality scale.

Table 4. Summary of Factor Analysis Results for Mentoring Relationship Quality Scale.

Item	Factors Loading
	Mentoring Relationship
1. My mentor and/or I have benefited from our relationship.	.86
2. I have effectively used my mentoring program	.79
3. I have enjoyed a high quality mentoring relationship.	.87
4. My mentor and I have frequent meetings and interactions (about once a week).	.72
5. I feel my teaching skills have improved because of the mentoring program.	.84
Eigenvalue	3.65
Variance	73.08

The second factor analysis was used to examine the mentoring satisfaction scale. The analysis showed that the factor loading of communalities ranged from .70 to .93. The rotated factors for further interpretation revealed that nine items had high loadings on the first factors, and two other items loaded on both first and second factor, including "I was able to schedule meetings with my mentor during work hours" and "My mentor understood my teaching context." These items were excluded from the analysis because

they do not seem relevant to present a specific factor or measure. See table 5 for a summary of factor analysis results for mentoring satisfaction scale.

Table 5. Summary of Factor Analysis Results for Mentoring Satisfaction Scale

Item	Factors Loading
	Mentoring Satisfaction
1. I am/have been satisfied with my mentoring.	.88
2. Mentoring has disappointed me. **R**	.81
3. Mentoring has failed to meet my needs. **R**	.79
4. My mentor took a personal interest in my career.	.78
5. I believe that my mentor was an eager and willing participant in the mentoring program.	.74
6. My mentor is a role model to me.	.85
7. I am satisfied with the mentor that I was assigned.	.93
8. My mentor and I discussed career goals often.	.70
9. My mentor's personality matched well with mine	.80
Eigenvalue	7.10
Variance	64.59

R: Reversed items

The third analysis was used to examine novice teachers' self-efficacy scale. The result showed that the factor loading of communalities ranged between .55 and .77. The scree plot confirmed one factor. See table 6 for a summary of factor analysis results of novice teachers' self-efficacy scale.

Table 6. Summary of Factor Analysis Results for Novice Teachers' Self-Efficacy Scale.

Item		Factors Loading
		Novice Teachers' Self-Efficacy
1.	I am confident that I am able to successfully teach all relevant subject content to even the most difficult students.	.68
2.	I believe that I can maintain a positive relationship with parents even when tensions arise.	.67
3.	I believe, as time goes by, I will continue to become more and more capable of helping to address my students' needs.	.55
4.	Even if I get disrupted while teaching, I am confident that I can maintain my composure and continue to teach well.	.71
5.	I am confident in my ability to be responsive to my students' needs even if I am having a bad day.	.61
6.	I believe that I can exert a positive influence on both the personal and academic.	.76
7.	I am confident that I can develop creative ways to cope with system constraints (such as budget cuts and other administrative problems) and continue to teach well.	.71
8.	I believe that I can motivate my students to participate in innovative projects.	.77
9.	I believe that I can carry out innovative projects even when skeptical colleagues oppose me.	.73
	Eigenvalue	4.82
	Variance	53.55

Reliability of Measuring Scales

Cronbach's Alpha was conducted for all the scales to ensure that the scales were measuring the intended outcomes. The result revealed that the mentoring relationship scale had a coefficient alpha ranging between .64 and .83 after deleting one item: "My mentor and I have frequent meeting and interaction (about once a week). In addition,

Cronbach's Alpha was .90. These data showed an internal connection between all measuring items in the scale. The mentoring Satisfaction scale was reduced to nine items based on the factor analysis results. Consistent with factor analysis, extracting the two items ("I was able to schedule meetings with my mentor during work hours" and "My mentor understood my teaching context") can slightly increase the scale reliability from α = .94 to .95. Additionally, another item was excluded based on the reliability test: "My mentor and I discussed career goals often." The remaining items showed a coefficient alpha ranging from .55 to .89.

The study's dependent variable, (novice teacher's self-efficacy), was analyzed using coefficient alpha and Cronbach's Alpha. The result showed that the scale had a coefficient alpha ranging between .35 and .64, while α = .89. For reliability purposes, an item was excluded, "I believe, as time goes by, I will continue to become more and more capable of helping to address students' needs." See table 7 for a summary of Cronbach alpha for all scales.

Table 7. Summary of Cronbach's Alpha for all Measuring Scales.

Scales	Number of items	Cronbach's Alpha (α)
Mentoring Relationship	4	.90
Mentoring Satisfaction	8	.95
Novice Teachers' Self-Efficacy	8	.89

Correlational Analysis

A Pearson Correlation test was used, and statistical correlations between investigated variables were found. The results revealed three findings. First, there was a

significant correlation between mentoring relationship quality and novice teachers' satisfaction with their mentoring program, $r(128) = .84$, $p = .000$ (two-tailed). The result suggested that novice teachers with high mentoring relationship quality tend to have high satisfaction with their mentoring program. The scatter plot suggested that the relationship is positively high. The second finding examined the relationship between mentoring relationship quality and novice teachers' self-efficacy that doubled down, and it showed a weak statistical significance, $r(131) = .21$, $p = .014$ (two-tailed). The scatter plot also showed a weak relationship between these variables. Third, mentoring satisfaction and novice teachers' self-efficacy showed a weak statistical relationship, $r(131) = .20$, $p = .019$ (two-tailed). Table 8 presents a summary of Pearson correlation test of mentoring relationship quality, mentoring satisfaction, and novice teachers' self-efficacy.

Table 8. Summary of Correlation Analysis.

Scales	1	2	3
1. Mentoring Relationship Quality	-		
2. Mentoring Satisfaction	.84**	-	
3. Novice Teachers' Self-Efficacy	.21*	.20*	-
Range	16	30	11
M	16.98	34.75	28.04
SD	3.01	6.02	3.20
Skewness	-1.40	-1.82	-.209
Kurtosis	3.40	4.44	-1.25

* $p < .05$ (2-tailed), ** $p < .01$ (2-tailed)

To determine the significant correlational findings, a Bonferroni adjustment test was performed to avoid type I errors and false interpretation. The adjusted alpha levels of .017 (.05/3) suggested that mentoring relationship quality is significantly correlated with mentoring satisfaction, $p < .017$. Additionally, there is a statistical relationship between mentoring relationship quality and novice teachers' self-efficacy, $p < .017$, but there is a marginal correlation between mentoring satisfaction and novice teachers' self-efficacy at the adjusted alpha.

Independent *t*-Test

An independent *t* test was used to test the impact of gender and mentor matches on mentoring relationship quality, mentoring satisfaction, and novice teachers' self-efficacy. The following headings present the categorical variables of gender and mentor matches by school, content, and grade levels.

Gender. After conducting an independent *t* test to assess the difference between male and female novice teachers, the results revealed that there was not a significant difference between males and females on mentoring relationship quality, $t(130) = .290$, $p = .773$, mentoring satisfaction, $t(130) = -1.100$, $p = .278$, and self-efficacy, $t(133) = -1.474$, $p = .143$. See table 9 for a summary of *t*-test analysis.

Table 9. Summary of *t*-Test Analysis Comparing Males and Females on Mentoring Relationship, Mentoring Satisfaction, and Novice Teachers' Self-Efficacy.

Variable	Male		Female		*t*-test
	M	SD	M	SD	
Mentoring Relationship Quality	17.11	1.66	16.96	3.19	.290
Mentoring Satisfaction	33.80	3.68	34.92	6.35	-1.100
Novice Teachers' Self-Efficacy	27.10	3.06	28.21	3.21	-1.474

* $p < .05$, ** $p < .01$.

Mentor Matches. Mentor matches have three different components that were tested separately, including matches by school, matches by teaching content, and matches by teaching the same grade levels. The following headings present all these components and analysis results.

Mentor matches by school. An independent *t*-test was performed to explore the differences between mentoring relationship quality and novice teachers' self-efficacy based on their assigned mentors who teach or work in the same school or not. The result showed that the mean of matches by school did not differ significantly, $t(130) = 1.33$, $p = .187$. The mean of novice teachers whose mentor was in the same school ($M = 17.12$ $SD = 2.84$) was higher than those teachers who were assigned to mentors outside their schools ($M = 16.11$, $SD = 3.92$). This result suggested that assigned mentors from the same school was slightly positive.

Also, an independent *t*-test was performed to test the difference between group means of novice teachers who were assigned to mentors from their schools ($M = 35.04$, $SD = 5.32$) or outside the school ($M = 33.05$, $SD = 9.16$) on mentoring satisfaction. The result did not show significant statistics between the groups, $t(130) = .918$, $p = .369$.

Comparing groups of novice teachers' self-efficacy based on their assigned mentors within the same school (M = 27.95, SD = 3.16) or outside the school (M = 28.58, SD = 3.45) did not differ significantly, $t(133) = -.795$, $p = .428$. Table 10 shows a summary of t-test analysis.

Table 10. Summary of t-Test Analysis Comparing Mentor Matched by School on Mentoring Relationship, Mentoring Satisfaction, and Novice Teachers' Self-Efficacy.

Variable	Mentor in the Same School		Mentor from Outside the School		t-test
	M	SD	M	SD	
Mentoring Relationship Quality	17.12	2.84	16.11	3.92	1.33
Mentoring Satisfaction	35.04	5.32	33.05	9.16	.918
Novice Teachers' Self-Efficacy	27.95	3.16	28.58	3.45	-.795

* $p < .05$, ** $p < .01$.

Mentor matches by teaching content. An independent t test was conducted to test the difference of mentoring relationship quality among novice teachers who were assigned to mentors from the same specialized content and others who were assigned to mentors based on mentor matches by content where the mentor teaches the same or different content areas. The results reveal that there was no statistical difference between novice teachers whose mentors teach the same content (M = 17.26, SD = 2.76) or not (M = 16.32, SD = 3.52) on their mentoring relationship quality, $t(130) = 1.632$, $p = .901$. Also, there was no significant difference among novice teachers' mentoring satisfaction, $t(130) = 1.054$, $p = .294$ based on their assigned mentors, (M = 35.11, SD = 5.75) and (M = 33.90, SD = 6.62). Additionally, the result of mentor matches by content did not show a statistical difference on novice teachers' self-efficacy $t(133) = .852$, $p = .396$ with (M =

28.19, *SD* = 3.07) and (*M* = 27.68, *SD* = 3.51). Table 11 presents a summary of *t* test analysis of mentor matches by content.

Table 11. Summary of *t*-Test Analysis Comparing Mentor Matched by Content on Mentoring Relationship, Mentoring Satisfaction, and Novice Teachers' Self-Efficacy.

Variable	Mentor Teaches the Same Content		Mentor Teaches Different Content		*t*-test
	M	SD	M	SD	
Mentoring Relationship Quality	17.26	2.76	16.32	3.51	1.632
Mentoring Satisfaction	35.11	5.75	33.90	6.62	1.054
Novice Teachers' Self-Efficacy	28.19	3.06	27.68	3.11	.852

* $p < .05$, ** $p < .01$.

Mentor matches by teaching the same grade level. After using an independent *t* test to assess the differences between novice teachers on their mentoring relationship quality, the results showed that novice teachers who have mentors from the same grade levels (*M* = 16.79, *SD* = 3.18) or not (*M* = 17.29, *SD* = 2.72) did not statistically differ, *t*(130) = -.935, *p* = .352. Also, the results revealed no statistical difference on mentoring satisfaction, *t*(130) = -.288 8, *p* = .774 with very close means (*M* = 34.63, *SD* = 6.20) and (*M* = 34.94, *SD* = 5.77). A very similar result of novice teachers' self-efficacy, *t*(133) = -1.172, *p* = .774 with small means difference (*M* = 27.79, *SD* = 3.19) and (*M* = 28.45, *SD* = 3.21). Table 12 presents a summary of *t* test analysis of mentor matches by grade levels.

Table 12. Summary of *t*-Test Analysis Comparing Mentor Matched by Grade Levels on Mentoring Relationship, Mentoring Satisfaction, and Novice Teachers' Self-Efficacy.

Variable	Mentor Teaches the Same Grade Levels		Mentor Teaches Different Grade Levels		*t*-test
	M	SD	M	SD	
Mentoring Relationship Quality	16.79	3.19	17.29	2.72	-.935
Mentoring Satisfaction	34.63	6.20	34.94	5.78	-.288
Novice Teachers' Self-Efficacy	27.79	3.19	28.45	3.21	-1.172

* $p < .05$, ** $p < .01$.

One-Way ANOVA

A one-way analysis of variance (ANOVA) was performed to examine the impact of community demographics on the investigated variables. First, ANOVA was used to assess the impact of the demographics on mentoring relationship quality. These demographics were sorted by the community population into four different groups: less than 500, 501-5,000, 5,001-10,000, and more than 10,000. Before reporting the analysis, the Levene's test for homogeneity of variance was examined to ensure that there was no serious violation of variance assumption, $F(3, 127) = .631$, $p = .596$. The results showed that there was no significant difference between novice teachers' mentoring relationship quality based on their community demographics, $F(3, 127) = 1.529$, $p = .210$. See table 13 for a summary of one-way analysis.

Table 13. Summary of One-Way Analysis of Mentoring Relationship Quality by Community Demographics.

Source	*df*	*SS*	*MS*	*F*	*p*
Between Groups	3	41.333	13.778	1.529	.210
Within Groups	127	1144.667	9.013		
Total	131	39045.000			

The second ANOVA test explored the impact of community demographics on mentoring satisfaction. There was not any indication of assumption violation based on Levene's test for homogeneity of variance, $F(3, 127) = 1.676$, $p = .175$. The result revealed no statistical differences among groups based on their community demographics, $F(3, 127) = .321$, $p = .810$. See table 14 for a summary of one way-analysis.

Table 14. Summary of One-Way Analysis of Mentoring Satisfaction by Community Demographics.

Source	*df*	*SS*	*MS*	*F*	*p*
Between Groups	3	35.702	11.901	.321	.810
Within Groups	127	4704.404	37.043		
Total	131	162705.000			

The third test of ANOVA was used to test the differences between novice teachers' self-efficacy based on the community demographics, which the result did not show statistical differences between the groups, $F(3, 130) = .308$, $p = .820$. Also,

Levene's test for homogeneity of variance did not show any significant violation of various assumption, $F(3, 130) = .737$, $p = .532$. See table 15.

Table 15. Summary of One-Way Analysis of Novice Teachers' Self-Efficacy by Community Demographics.

Source	*df*	*SS*	*MS*	*F*	*p*
Between Groups	3	9.677	3.226	.308	.820
Within Groups	130	1363.136	10.486		
Total	134	106709.000			

Quantitative Summary

1. There was a correlational relationship between mentoring relationship quality and mentoring satisfaction, $r = .85$, $p < .001$.
2. There was a correlational relationship between mentoring relationship quality and novice teachers' self-efficacy at adjusted alpha of .017.
3. There was a marginal correlation between mentoring satisfaction and novice teachers' self-efficacy with adjusted alpha, $p > .017$.
4. Assigned mentors from the same school did not show statistical impact on mentoring relationship quality, mentoring satisfaction, and self-efficacy at $p > .05$.
5. Assigned mentors who teach the same content areas did not show statistical significances on mentoring relationship quality, mentoring satisfaction, and novice teachers' self-efficacy at $p > .05$.

6. Assigned mentors from the same grade levels did not show statistical significances on mentoring relationship quality, mentoring satisfaction, and novice teachers' self-efficacy at $p > .05$.
7. Gender and school community demographics by population did not have a significant influence on all investigated variables, $p > .05$.

Qualitative Analysis

The responses to overriding qualitative questions were analyzed through an interpretive methodology, using Creswell's (2012) suggestion of structured codes and categories to identify emerging themes. After downloading the survey responses, I collected and organized all qualitative responses into an Excel document to facilitate the analysis procedure. Then, the significant statements were highlighted and placed into a separate column. I coded and categorized these statements by highlighting related codes and categories for backward analysis purposes. The analysis focused on repetitions of responses and ideas that were shared. The following headings present the subject of the incorporated narrative questions.

Mentoring Program Features

Participants were asked to provide narrative responses to this question: "Please describe the most valuable features of the mentoring program. Why?" There were 107 participants who provided their narrative responses. After the analysis procedure, five themes emerged from these responses, and some participants provided further considerations that can further maximize their benefits from the program. The identified themes were related to the program features. Figure 3 has a summary of responses transcriptions and analysis.

Mentoring Program's Feature

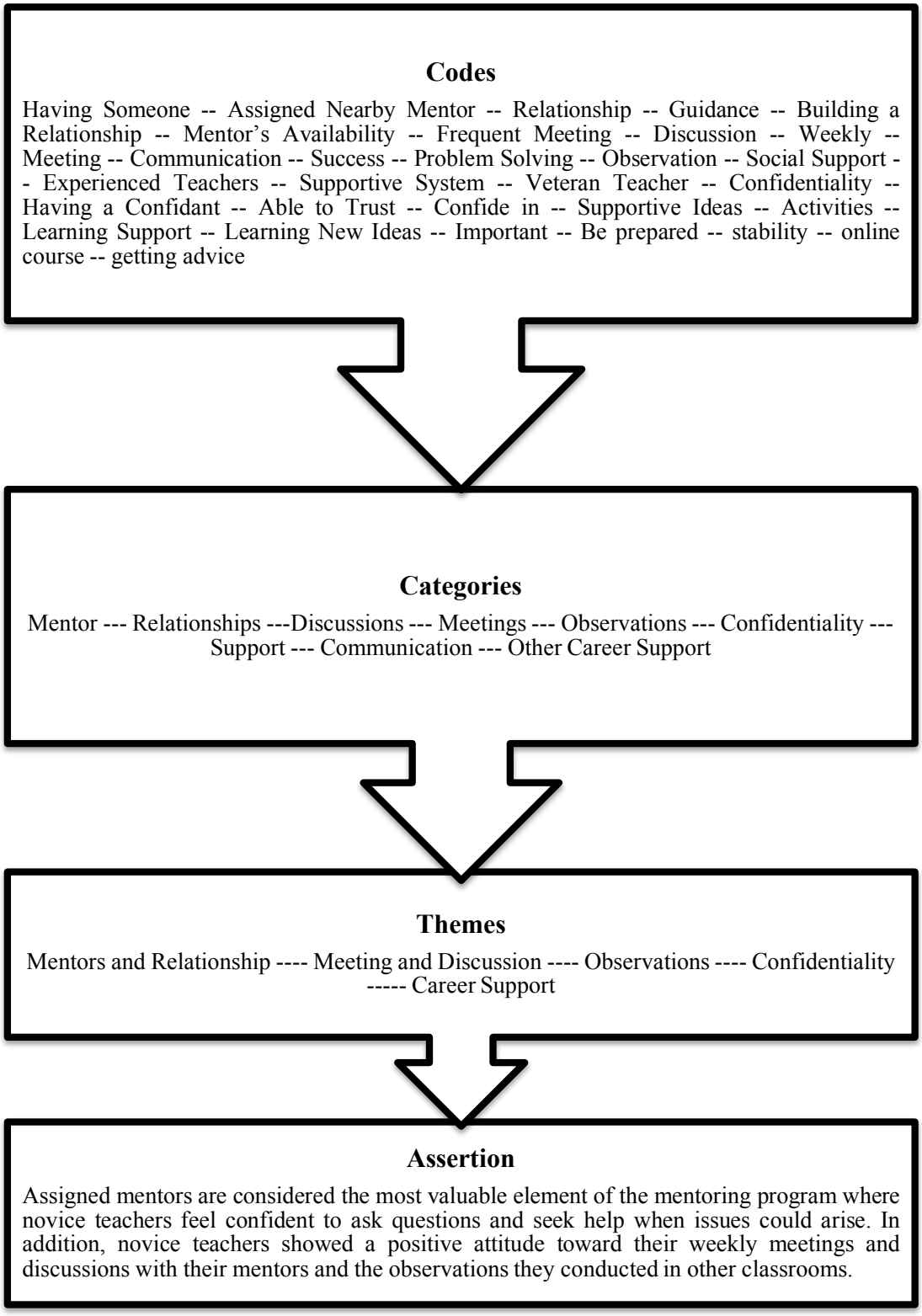

Figure 3. Qualitative Data Analysis Chart of Mentoring Program Feature.

Below are headings representing these themes.

Mentor. Mentors provide a strong feature of the mentoring process. Participants emphasized the importance of having a person at their side who can be available when they need to ask questions or solve a problem. There were sixty-seven participants that indicated the most powerful aspect of the mentoring program was the person assigned to guide their work in the school. One participant mentioned:

> The most valuable features of the mentoring program are the elements of experience mentors bring to the relationship. Whether it be questions on content, content delivery, or behavior/classroom management, mentors more than likely have lived through those same things and can provide helpful and thoughtful insight.

Also, a participant indicated that "the most valuable feature of having a mentor program is having a designated person to ask questions to." As well, some participants relied on the assigned mentor to acquire knowledge and get their questions answered. For example, a participant indicated the importance of "being able to ask questions to one particular person in regards to the school's way of doing tasks, where things are located. Just the day to day questions that other teachers assume is common knowledge." In addition, a participant indicated that "If I ever have any questions or concerns I can go and talk to my mentor right away. It is a good feeling knowing that I have someone with experience that I feel comfortable talking with."

Novice teachers seemed to value the relationships that were established with their mentors that led them to be more open and comfortable discussing their issues with their mentors. For example, a novice teacher indicated that "I can't say enough about how

beneficial the relationship was between my mentor and myself. I gained so much insight and guidance from her. It is an invaluable program for a first-year teacher." This relationship was not only derived from how much assistance novice teachers received and getting their questions answered, but also it was related to the importance of trust and confidence to ask for assistance. For example, this participant identified the most important feature of the program as "the relationship between my mentor and I. A confidential meeting where I could ask any question without worry of being looked down upon." Also, another participant indicated the mentoring program helped with "building a relationship with and learning from [the] mentor." To conclude, assigned mentors are the most powerful features of the mentoring program whereby novice teachers receive their support and get their questions and concerns answered. Novice teachers can benefit greatly from their experienced mentors.

Meetings and Discussions. Meetings and discussions were part of another emerging theme that was identified from novice teachers' responses describing their mentoring program features. Twenty-three participants mentioned the importance of having a meeting time to discuss issues, concerns, questions, and to reflect on their teaching practices. This feature was related to the weekly meeting and scheduled time for discussions. Among these responses, participants mentioned the importance of "having a scheduled time to sit and just talk," "regular meetings," "meeting so often," "meeting with my mentor," "meeting with my mentor weekly," "the one-on-one meeting," and "the weekly mentor meetings to discuss and solve challenging areas." The frequent meetings seemed to be important for increasing novice teachers' and their mentors' interactions and discussion. A participant addressed the program features by emphasizing "the

consistency of meetings. Knowing that there was an hour or more every week to talk through things was comforting."

Observations. Observations were identified by 10 participants as one of the program features. The observation assignments were an important feature whereby the novice teachers could observe and reflect on what had been done in the classrooms. These observations were done in various classrooms, so they had opportunities to observe experienced and veteran teachers. Also, a novice teacher indicated that observations were not limited to school, but also extended within the district. A participant wrote in a response about important mentoring program features, "the time [I] spent observing other teachers within the district." However, one participant indicated that the amount of observation time should be reduced.

Confidentiality. Confidentiality was one of the features that seven participants indicated in their responses. Confidentiality seemed highly important for novice teachers to discuss the most challenging issues. A participant indicated an important feature is "being able to talk through issues with my mentor and it be confidential. Issues that arose within the turmoil of our school setting." In addition, this confidentiality and trust was assured by the program roles, which helped to establish a comfortable relationship between a mentor and a novice teacher. Another participant emphasized that "the confidentiality that the program assured me was probably the most valuable feature. It allowed me to express freely the concerns, uncertainties, and frustrations that I experienced."

Novice teachers linked the importance of confidentiality to the ability to keep their issues and frustrations away from others, so they would not encounter an

embarrassing issue. A participant described the program's feature as:

> Having a confidant. I did not need to be concerned that my mentor would be talking about me to others. This may seem petty, but I probably wouldn't have been as comfortable discussing challenges that I was experiencing if I suspected that she was then talking about it/me to another. I like that I had someone specific to go to that not only could help but would help me.

Therefore, this confidentiality could contribute to strengthening a mentor's and novice teacher's relationship.

Career Support. Career support was identified as a general theme that could describe some general comments by participants, such as having a supportive system where novice teachers can seek problem solutions and advice. A participant mentioned that "the mentor program connected me to a fellow colleague and have gained a new friend in the process." Another participant referred to mentoring program features as "having a supportive system to help me as a teacher." Because novice teachers seemed to received different kinds of support and guidance, one participant mentioned that "the opportunity to have an online course to coincide with the program" was of value. A participant described the program features as:

> all of it for me was very much appreciated! I learned so much of what I needed to do and what I will do as a teacher for the following school year. It was nice to visit with another teacher who understands what I am going through.

To sum up, assigned mentors are considered the most valuable element of the mentoring program where novice teachers feel confident to ask questions and seek help when issues could arise. In addition, novice teachers showed a positive attitude toward

their weekly meetings and discussions with their mentors, the observations they conducted in other classrooms, mentoring confidentiality, and overall career support.

The Mentoring Program and Novice Teachers' Needs

Another question incorporated in the survey was, "Overall, does your mentoring program meet your needs as a growing professional? Why or Why not?" There were 105 participants that responded to this question. The responses were divided into two parts based on the question, including the first part as an open-closed question and the second part as reasoning responses to an open-ended question.

Based on the analysis of the first part of the question, eighty-six of participants agreed that the mentoring program met their needs as a growing professional. Sixty-eight used the word "yes" and eighteen used alternative words such as "absolutely," "I believe it meets and exceeds my needs," "definitely, I would agree," "I think so," "I think it helped tremendously," "I feel that the program met my needs," and "sure." In addition, there were five participants used the word "no" and one participant used alternative words: "It did not meet all my needs". Six participants were identified as undecided because they generally expressed their attitudes as further recommendations or needs for assistance were warranted. For example, a participant indicated that "I could have been with less paperwork and formality. It would have been just as beneficial" and "I would [have] liked more opportunities from the district to observe other professionals." The last five participants used both terms "yes" and "no" to respond to the question. All responses were followed by narrative reasoning responses that could explain novice teachers' attitudes toward the program, which are discussed in the second part of the analysis.

Mentoring Program Support and Novice Teachers Needs

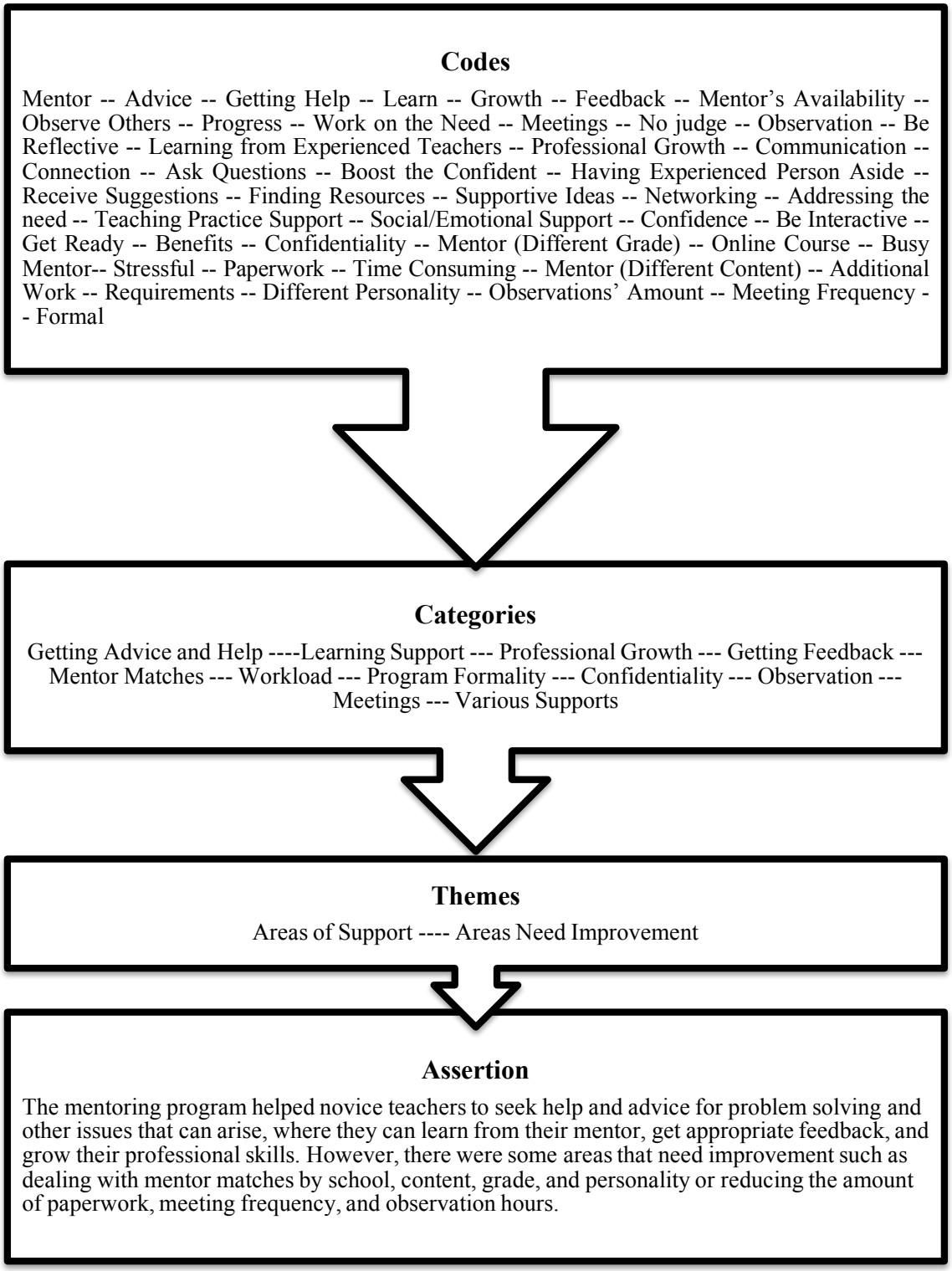

Figure 4. Qualitative Data Analysis Chart of Mentoring Support and Novice Teacher's Needs.

The second part focused on novice teachers' comments about whether the mentoring program met their needs or whether there was a need for further consideration. Therefore, these comments were sorted into two different categories, including areas of support where novice teachers explained why the program was supportive. The narrative responses helped to identify the program elements that contribute to supporting their needs. Also, there were some areas that need further improvement. Figure 4 presents a summary of qualitative data analysis of the mentoring program support and novice teachers' needs.

Areas of support. There were forty-seven participants who indicated that assigned mentors helped them navigate their teaching practices because they could seek help and assistance when they needed it. The mentoring program allowed novice teachers to build a connection with mentors whereby they can develop their teaching skills and get appropriate assistance. A participant emphasized that:

> I would agree that the program did meet my needs. By having a veteran teacher to communicate with to learn about my school as well as receive information on how to accomplish certain goals with teaching.

Some participants indicated that the assigned mentors were the major resources to meet their needs compared to other elements of the program. A participant emphasized the importance of an assigned mentor: "my mentor would have been my mentor no matter if we were in the program or not, so I do not feel the program helped with me growing as a professional, but rather my mentor [did]." Another participant also pointed out that "the mentoring program has helped me address any needs that I may have had as a new teacher. My mentor and I have worked towards achieving professional goals." Mentors'

experience was valued because that can influence novice teachers' attitude towards their mentoring program as this participant indicated that "I am blessed with a fantastic mentor with decades of experience and who really cares about the students."

Novice teachers who showed positive attitudes towards their mentoring support seemed to rely on their mentors to provide them with assistance. As an example, a participant indicated that "it was helpful because I frequently had questions. I was able to meet with my mentor weekly and answer those questions which helped me feel more confident in my work." Additionally, mentors may play a significant role in helping novices to feel comfortable and willing to learn. For example, a novice teacher emphasized that:

> It allows for more and open communication about first year of teaching. It offers a chance to talk freely and ask questions in a judge free zone. Also, my mentor would always ask what I needed help with to encourage me to ask for help, which can be hard thing to do.

Also, some comments emphasized the effectiveness of getting feedback. A participant indicated that "she [the mentor] has helped me grow as a teacher by providing frequent feedback." Also, the program supported the growth of professionalism, and a participant mentioned:

> I grew as a teacher more than I ever thought I could. Knowing I am moving on to a different state this next year, I feel confident that I can do my job and excel in my teaching.

Other positive areas of support include confidentiality, observations, suggestions for improvement and success, and social and emotional support. One participant mentioned

that “it helped me on an emotional level, but since my mentor was not teaching the same grade, it was difficult to talk about content.”

Areas that need improvement. Areas that need improvement were identified. The responses revealed that mentor matches, including the teaching or working in the same school (three participants), teaching the same content (four participants), teaching the same grade levels (four participants), and personality (one participant) were important for novice teachers. Assigned mentors who teach or work in another building seemed a challenge for novice teachers. A participant indicated that “it was very difficult having a mentor in a different building. I ended up asking a lot of questions I would’ve asked my mentor to others at my school.” This could impact the mentoring interaction between mentors and novice teachers. Another participant said that “my mentor was in another building, difficult to communicate with, and always busy doing something else. I learned that as a professional I don’t want to be anything like my mentor.” Other comments were related to not having specialized mentors who teach the same content. This participant indicated that:

> My area is so specialized they had to select a mentor that was not in my building and did not teach my grade level. I think it might have been helpful to have two mentors (and maybe meet with each one on alternating weeks), one in my building and one in my content area, that way I could gain a better understanding of how things run and how my age group functions along with content questions.

In addition, teaching the same grade was an important element that could contribute to novice teachers’ support. Four novice teachers emphasized their needs of having a mentor who teaches the same grade level. The issue was related to communication

difficulties in connecting teaching methods to each other. The final area of mentor matches concerned personality matches, but this issue seemed covered with mentors' assistants. One participant mentioned that "My mentor and I have slightly different personalities, which sometimes can be hard. But, I can say overall my mentor has given me great compliments and great help at certain times throughout the first year."

Another area that needs improvement was related to the workload, including the amount of paperwork (four participants), observation hours (two participant), the online course that novice teachers were required to take (two participants), and frequent meetings (three participants). Three other participants mentioned the importance of reducing additional workload, but cited no specific areas for reduction; rather, they valued the importance of having mentors. One participant hoped to reduce the formality of the program. The participant indicated that "it was too formal for me. It seemed a little forced when filling out the meeting sheets." Also, negativity that a mentor may transform to novice teachers could impact mentoring benefits. This participant mentioned an issue that plagued mentoring communication, "I was often upset with how negative about the system my mentor is."

Challenges of Working Conditions

A third question was related to exploring the challenges of working conditions based on novice teachers' perceptions. The question was, "At your site, what are the most challenging working conditions? Please be specific." One hundred and two responses were submitted. After analyzing these responses, five emerging themes were identified. See figure 5.

Challenges of Working Conditions

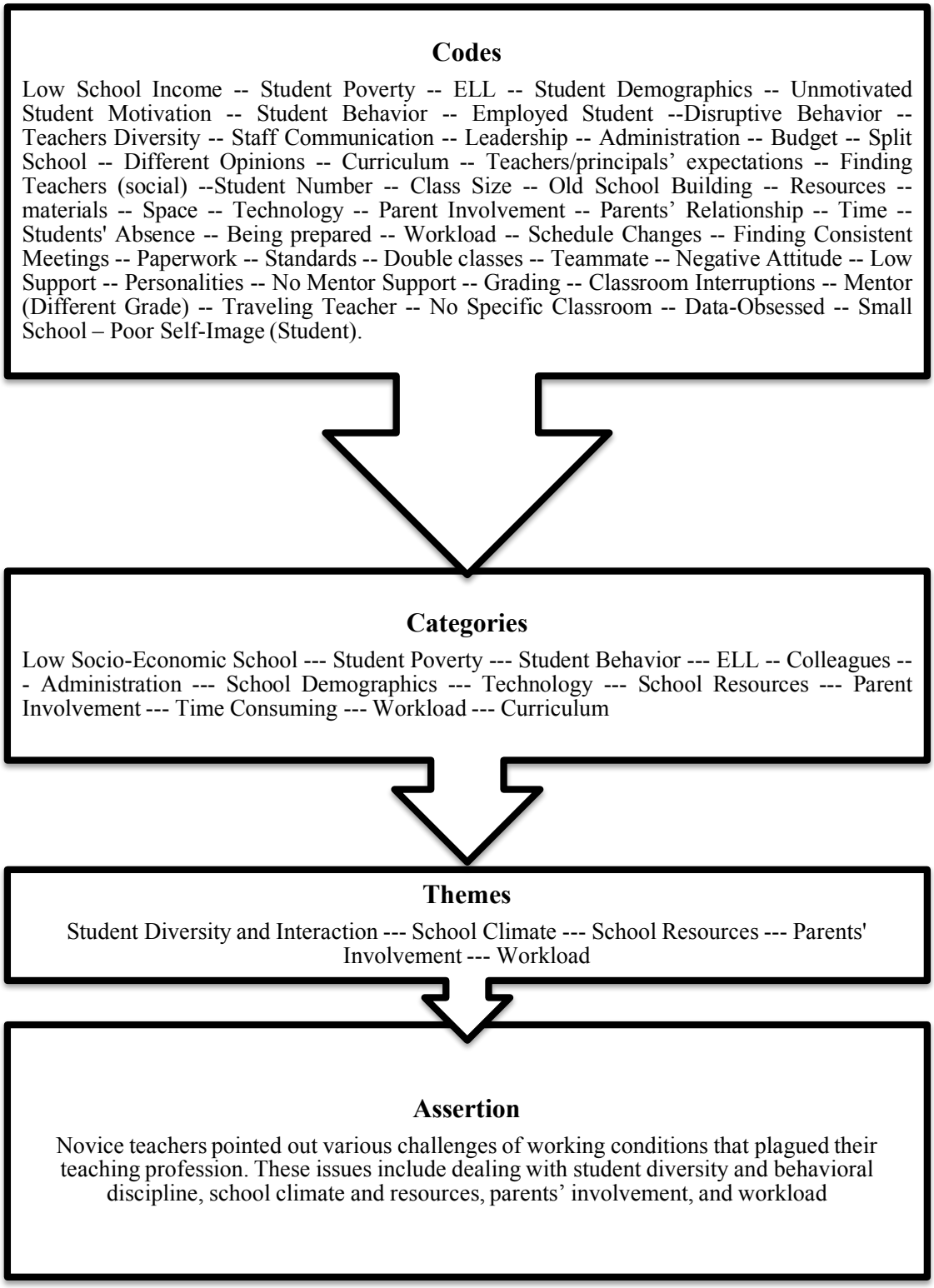

Figure 5. Qualitative Data Analysis Chart of Challenges of Working Conditions.

The following headings present these themes.

Student Diversity and Interaction. Student diversity and interaction were frequent challenges that many novice teachers mentioned. Student diversity includes low socioeconomic students and English language learners (ELLs). Understanding the issue of low socioeconomic students could increase novice teachers' effort to ensure that students are safe. The comments analysis revealed that there were some associated issues with teaching in low socioeconomic areas such as lack of students' motivation, lack of preparedness for school, and disruptive behavior. A participant indicated that most of the challenges of working in such a condition is "working with English language learners." Also, there is the issue of understanding those students' needs. Another challenge of student diversity is working with employed students and students who travel for participating in sports, which could lead to further work of planning for individual instruction. For example, a participant indicated that:

> We work with older students who are employed or are seeking employment. Our schedules can get very hectic keeping up with everyone! We have to individualize instruction based on each students' needs and also their availability.

Student interaction includes behavioral issues, learning difficulties, and motivation. These challenging areas were discussed in novice teachers' responses. There were ten comments that highlighted students' behavioral issues, four comments linked to motivational issues, and one related to students' learning difficulties. The behavioral issue was related to disruptive behavior that impacts the classroom and learning environment. Examples of novice teachers' responses include, "children with behaviors that can be difficult to manage" and "many disruptive behaviors."

School Climate. School climate was widely represented among participants' comments. School climate refers to the interaction with colleagues and administration. A participant indicated that colleagues' opinions and personalities can create different challenges to teachers' interactions and relationships with each other. Also, there is a disparate understanding of teaching practices that can create different perceptions on teaching practices among teachers in schools and even the recognition of different specialized areas such as physical education. A participant claimed that there is a low recognition of the importance of physical education. Also, teamwork can create a challenge for teachers on how to work with each other, and there is a need to match teachers based on their needs and similar work duties such as teaching the same grade levels.

Another area of school climate included administration and how teachers meet administrators' expectations. For example, a participant mentioned that "other teachers and understanding how to work with the principals expectations." Even though there is no explicit explanation of how an administration could create a challenge for novice teachers, there is a need to understand principals' expectations, availability to discuss issues, and dealing with data and assessments. Some novice teachers indicated their needs for administrative support with some issues such as disruptive students or empowering collaborative working team. A novice teacher stated:

> I feel that my biggest challenge was the support from the principal. It was lacking, especially when I needed it. I felt that when I was struggling to come up with solutions to help behaviorally challenged students, [the principal] did not provide the support that I needed.

School Resources. School resources were discussed in novice teachers' responses. Lack of school resources were one of the indicators of challenging working conditions. Seven novice teachers indicated that they struggled with limited to moderate resources in their schools. Two participants stated that there was a lack of computers and technologies, of which much of the hardware seemed outdated. Another two participants mentioned the issue of budget and printing constraints.

Parents' Involvement. Parents' involvement and relationships were discussed in the responses. Two participants indicated that they encounter some difficulties talking to parents and discussing students' progress. One of the participants indicated that "the most challenging working conditions are maintaining a good relationship with parents and talking to them about students' behaviors or areas of concerns." The second participant mentioned the issue of how parents' ideas and suggestions can be incorporated.

Workload. Workload was a challenging issue that some novice teachers mentioned. Workload included the number of classes teachers prepare for, and the stressors of content and high stakes standards. Here are three examples of participants' responses:

> Teaching three different classes challenged me the most. It was a lot of new content for me to learn and then make sure it was aligned to the standards. I put in a lot of very long days preparing for the following day/week. It was difficult for me to give up that time with my own children.
>
> Being asked to cover more than one class at a time. There were times when I was asked to cover two class at once because of my specialized content area. I also cover more than one school. It is difficult balancing time conflicts between

schools and often being asked to monitor things in several different places at once.

My most challenging working conditions were being prepared for class every day. Having to teach four separate prep classes a day was very hard to stay on top of. Not only was planning a lot of work, but grading was also a lot of work.

Another issue of workload is the lack of finding a time to work in schools to finish some school-related work before going home. Novice teachers had to spend time at night for preparation.

To sum up, novice teachers pointed out various challenging working conditions that plagued their teaching profession. These issues include dealing with student diversity and behavioral discipline, school climate and resources, and workload.

Qualitative Summary

In this qualitative analysis, three open-ended questions were incorporated in the survey to collect further narrative explanations about novice teachers' perceptions of mentoring program's features, mentoring program support, and the most challenging working conditions. The analysis showed that the assigned mentor seems to be at the heart of the program whom novice teachers depend on to seek support and assistance. Mentor matches and expertise influence novice teachers attitudes about the mentoring support they received. Novice teachers value their mentoring confidentiality and other kinds of support such as weekly meetings and observations. Some mentoring issues were noted when novice teachers were not able to have assigned mentors from the same school, content areas, and grade levels.

In addition, the number of meetings and observation hours were a concern for some participants when they progressed in the profession or were preoccupied with other teaching duties. While novice teachers seem to benefit from their mentoring programs, issues exist that are related to teaching contexts such as students' diversity, school climate, school resources, parent involvement, and workload. See figure 6 for a qualitative summary.

Qualitative Assertions Summary

Assertion One	**Assertion Two**	**Assertion Three**
Assigned mentors are considered the most valuable element of the mentoring program where novice teachers feel confident to ask questions and seek help when issues could arise. In addition, novice teachers showed a positive attitude toward their weekly meetings and discussions with their mentors and the observations they conducted in other classrooms.	The mentoring program helped novice teachers to seek help and advice for problem solving and other issues that can arise, where they can learn from their mentor, get appropriate feedback, and grow their professional skills. However, there were some areas that need improvement such as dealing with mentor matches by school, content, grade, and personality or reducing the amount of paperwork, meeting frequency, and observation hours.	Novice teachers pointed out various challenges of working conditions that plagued their teaching profession. These issues include dealing with student diversity and behavioral discipline, school climate and resources, parents' involvement, and workload.

Assertions Summary

Assigned mentor is a fundamental element in the mentoring process in which their matches and expertise play significant roles in maximizing novice teachers positive attitude about their mentoring program's support. This support needs to include a potential attention to novice teachers' challenges of working conditions.

Figure 6. Qualitative Assertion Summary.

Summary

This chapter presented the study findings. These findings were presented through quantitative and qualitative analysis. In the quantitative section, a detailed analysis of screening procedures, including preliminary screening, factor analysis, and scale reliability was discussed. Then, I proceeded to the main analysis that included a correlation test, Bonferroni correction, an independent *t*-test, and one way ANOVA analysis. In the qualitative analysis, an analysis of the survey questions and emerging themes were presented. The next chapter highlights the study discussion and implications.

CHAPTER V

DISCUSSION AND IMPLICATIONS

As discussed earlier, the current study focused on exploring the impact of mentoring relationship quality, mentoring satisfaction, and mentor matches on novice teachers' self-efficacy. In addition, the study continued to qualitatively explore the mentoring program features, mentoring program support to novice teachers' needs, and challenges of working conditions, so that participants could provide narrative responses to three open-ended questions incorporated in the survey. In this study, possible connections between all investigated variables were examined. The study data were obtained using an online survey distributed to all first-year teachers currently enrolling in a mandatory mentoring program in a Midwestern State. After responses were obtained, data was downloaded, sorted, and analyzed. In this chapter, I discuss the study findings, limitations, and future implications for constructing mentoring programs. Also, highlighted will include my university teaching context and a conceptualization of a future mentoring program in Saudi Arabia.

Discussion

This study is built on the importance of exploring the impact of a mentoring program in a Midwestern State on novice teachers' self-efficacy to provide further understanding of mentoring effectiveness in schools because these programs exist to

assist novice teachers in strengthening their teaching skills (Andrews & Quinn, 2005; Heider, 2005). Mentoring programs' effectiveness is important to ensure that novice teachers receive adequate assistance during the beginning of their careers. As such, researchers have examined mentoring influences on novice teachers in many ways, such as classrooms, instruction, retention, job satisfaction, and self-efficacy, but there were still gaps in determining specific and essential elements of these programs. Xu and Payne (2014) emphasized that the examination of mentoring outcomes focused on *dichotomous examination*. Generally, mentoring programs have an influence on mentees' professional development when researchers compare mentored to non-mentored participants (Xu & Payne, 2014). Among the specific mentoring elements that are mainly explored in this study are mentoring relationship quality, mentoring satisfaction, and mentor matches. Despite the studies performed on mentoring programs' effectiveness, there is a paucity of opportunities to examine the impact of these elements on novice teachers' self-efficacy. Thus, this study explored three overriding main questions.

The first question was, "What is the relationship between mentoring relationship quality and novice teachers' self-efficacy?" In examining mentoring relationship quality, I found a correlation between quality that and novice teachers' self-efficacy at adjusted alpha levels of $p = .017$. The mentoring relationship quality was built on reciprocal relationships, the benefits of the program, overall attitude toward the relationship quality, and mentoring program support. Well-established relationship quality between mentors and mentees was important for supporting novice teachers to maximize mentor–novice teacher interactions. I found that mentors played significant roles in the program in that they were a potential feature of the mentoring program. Even though almost half the

participants mentioned the importance of having mentors, this seems likely to be the fundamental element of any mentoring program because mentoring programs are different from other induction programs, such as seminars or professional development. Even so, assigning mentors is still crucial, requiring training and effective interpersonal skills to maximize benefits. It seems that in a mandatory program, there is a demand on mentors to make an effort to strengthen interpersonal relationships; for example, mentors' ability to be more supportive and proactive to encourage novice teachers to get more involved in professional communication and to not hesitate to seek assistance is crucial.

Even though the mentoring process relies on the strength of such a relationship, Davis (2001) was skeptical that an established relationship between mentor and mentee is not mandated. Mentorship is primarily linked to the guidance process mentors can offer to their mentees through a close relationship. Because approximately half the novice teachers in this study emphasized the importance of assigned mentors, this seemed to support Callahan's (2016) claim that "a mentoring program is only as strong as its mentors" (p. 7). This requires attention to all aspects of relationships to enhance the overall benefits.

Researchers (e.g., Swan et al., 2011) have reported a low self-efficacy for teachers at the beginning of their teaching practices, but the adequacy of the support they receive can improve this (LoCasale-Crouch et al., 2012; Tschannen-Moran & Woolfolk-Hoy, 2006). Ensuring novice teachers receive necessary support is a fundamental process related to mentoring aims and effectiveness (Moir, 2009; Portner, 2008; Waterman & He, 2011). Thus, mentoring relationship quality could play a significant role in supporting novice teachers because this relationship is supposed to increase the reciprocal benefits to

both parties, leading novice teachers to seek necessary help to increase their skills and teaching efficacy. Kram (1985) emphasized that "when relationships allow one to address important needs and concerns, they are enhancing and valued" (p. 13). Also, it is important to avoid negative attitudes toward an educational system because that may influence novice teachers' attitudes toward the profession as a whole.

A possible interpretation of the connection between the mentoring relationship quality and novice teachers' self-efficacy is that self-efficacy is related to the relationship benefits, guidance, and overall support that novices receive to enhance their teaching skills. When novice teachers feel this relationship is well established, they tend to have the personal confidence to perform a teaching task without the fear of failure because they are able to seek assistance to fix unexpected problems. Frequent mandated interaction and communication between mentors and novice teachers can enhance the program benefits because there is an opportunity to engage in professional discussion about various topics related to teaching. Exchanging ideas can enhance the reciprocal benefits of the program, which can also enhance the mentoring relationship. In the current program under study, mentors and novice teachers were responsible for establishing professional discussion during their conferences and reporting their agendas.

In such a formal mentoring program, the established relationship develops over time since assigned mentors usually are paired by a third party (Ragins et al., 2000). This process needs more attention to focus on what mentors can do in order to enhance this relationship. In this circumstance, both mentors and novice teachers need to be proactive to set their mentoring and professional goals.

The second question was "What is the relationship between mentoring satisfaction and novice teachers' self-efficacy?" In this study, mentoring satisfaction was focused on novice teachers' feelings and attitudes toward their mentoring program; the scale included overall satisfaction with the mentoring program and satisfaction with the assigned mentor. As presented in the results, mentoring satisfaction showed a marginal trend toward correlation with novice teachers' self-efficacy. Besides this finding, satisfaction reflects the amount of benefits mentees receive from their mentoring programs (Xu & Payne, 2014), which is correlated with the strength of mentoring relationships (Kram, 1985). This study found a weak connection between mentoring satisfaction and novice teachers' self-efficacy, but novice teachers who are satisfied with their mentoring programs tend to have more self-efficacy.

To increase novice teachers' satisfaction with their program, I suggest, based upon the results of the study, ensuring novice teachers' confidentiality, seems critical and valued. This has the potential to positively influence their attitudes toward their mentoring program and maximize their learning benefits when they feel the program is designed to help them rather than evaluate or judge their teaching ability. This can lead them to express their needs and ask for assistance. In this program where novice teachers were recruited, there was a demand for exploring novices' needs and working toward supporting those needs, including the needs related to teaching and classroom issues, and the use of evaluation procedures in the districts.

Confidentiality was valued and could contribute to enhancing mentoring outcomes. Ganser (2002) confirmed that principals should ameliorate and support mentoring effectiveness by "respecting the trust and confidentiality between new teacher

and mentor" (p. 7). In addition, Lynch, DeRose, and Kleindienst (2006) linked mentoring programs' success to the importance of trust that mentors can secure and maintain for their mentees. It is noteworthy that building trust can take time. Martin (2013) mentioned that "trust between the participants and their willingness to be open and honest about the emotions associated with their roles as teachers developed over time. some participant pairs saw this trust develop rather quickly" (p. 140). To ensure the development of trust, Martin emphasized that any type of supervisory role can weaken mentoring trust, which can also impact the relationship. Perhaps the program can deal with that by ensuring applicable policies are put in place that comfort both parties about their confidential rights. This will hopefully increase their trust of each other and encourage them to share their concerns and needs.

Satisfaction with mentoring programs is connected to the mentoring relationship. In this study, the results were highly correlated (r = .84). This positive correlation shows that mentoring relationship quality increases novice teachers' satisfaction with their designed mentoring program. This is important for healthy interaction and communication between mentors and novices. Because mentors are the key component of established relationships, they influence novices' perception of mentoring benefits and attitude about the program.

The third question was "In what ways do mentor matches make a difference in terms of mentoring relationship quality, satisfaction, and novice teachers' self-efficacy?" In this study, novice teachers were asked about their mentors in terms of three areas: whether they taught or worked at the same school, whether they taught the same content, and whether they taught at the same grade levels. Starting with mentor matches by

school, I found that the mentor being at the same school did not have a statistically significant impact on the mentoring relationship quality. However, some novice teachers expressed their need for assigned mentors from their school because having mentors from other schools made it difficult for them to communicate or get immediate assistance when needed. Assigned mentors can increase mentoring interaction and communication when they teach or work in the same school as their mentees. This interaction seems to have a positive influence on the mentoring relationship. Mentors' presence in the same school can increase their availability, which is consistent with Desimone et al.'s (2014) study, which found that "novice teachers spent more time with mentors who are in the same building as them" (p. 100).

In this study, the mentor being at the same school favored the relationship quality and the mentee's satisfaction, but not self-efficacy. For example, I found that novice teachers who were assigned to mentors from the same school rated their relationship quality higher than those who were assigned to mentors from outside their schools. However, mentor matches by school did not support novice teachers' self-efficacy. This did not seem surprising because there is no justification that mentors who work/teach in the same school can increase novice teachers' self-efficacy. Ragins et al. (2000) emphasized that "the presence of a mentor alone does not automatically lead to positive work outcomes; the outcomes may depend on the quality of the mentoring relationship" (p. 1190). But, it is possible that a mentor's presence at a school can increase mentoring interaction and communication, which ultimately can influence self-efficacy.

Mentor matches with those teaching the same content areas did not show a statistical influence on any of the three variables. Still, even though these findings were

not statistically significant, novice teachers who had mentors teaching the same content areas still rated their mentoring relationship, satisfaction, and self-efficacy slightly higher than those whose mentors did not teach the same content. This seems similar to the findings of LoCasale-Crouch et al. (2012), who found that novice teachers highly rated their mentoring program support when they were assigned to mentors who had experience in the subject and grade level being taught.

The analysis of mentor matches by content favored assigned mentors from the same teaching subject. As discussed previously, some participants hoped for mentors who taught the same content because they believed that specialized mentors could provide further support when it comes to specific content expertise such as subject demonstration or classroom materials.

Mentor matches by grade levels did not have a significant influence on relationship quality, satisfaction, or self-efficacy, but novice teachers whose mentors were from the same grade level rated their relationship and satisfaction slightly higher than those with mentors from other grade levels. On the other hand, novice teachers had slightly higher self-efficacy when they were assigned to mentors from other grades, which was similar to mentor matches by school. Notably, grade-level match was connected to understanding students' needs and applying appropriate instructional designs.

In the study, gender and community demographics were controlled for, but these variables did not show an impact on the investigated variables, which is consistent with Tschannen-Moran and Woolfolk-Hoy's (2006) findings that gender and race did not seem to influence teachers' self-efficacy. In addition, they found no difference between

urban and rural areas, even though they mentioned that the teaching context in urban districts seemed more challenging (Tschannen-Moran & Woolfolk-Hoy, 2006).

Implications

Mentoring programs exist to help novice teachers increase their readiness for the classroom, and novice teachers can develop complex pedagogical skills beyond what they learned in universities (Odell, 1990). Although studies have discussed mentoring programs from many different aspects, there has been a strong focus on specific outcomes, such as retention rate and classroom practices (Fletcher & Strong, 2009). Because novice teachers' experience in the classroom has a formative influence on their professional development, further attention to personal development and their perception of self-efficacy is crucial. Novice teachers are already equipped with pedagogical theories and knowledge, but they need to put their knowledge into practice, so the most powerful tool for learning is to involve learners in actual learning practices (Feiman-Nemser, 2001).

The importance of mentoring programs stems from the need to support and improve teachers' effectiveness. In response to findings claiming that teachers' qualifications and effectiveness have a direct impact on students' achievements and progress (Darling-Hammond, 2000; Jordan, Mendro, & Weerasinghe, 1997; Mendro, 1998; Pretorius, 2012; Sanders & Rivers, 1996; Wright, Horn, & Sanders, 1997), equipping classrooms with ready teachers who are able to direct students' learning is crucial. This has led researchers to consider this kind of support to novice teachers to secure teaching effectiveness and achieve desired outcomes. This study was primarily focused on examining some elements of mentoring programs such as mentoring

relationship quality, mentoring satisfaction, and mentor matches on novice teachers' self-efficacy. This focus was intended to help increase the awareness of well-constructed mentoring programs by exploring specific elements that had not been specifically addressed in prior studies with a specific attention to self-efficacy.

To conclude, five recommendations should be considered. First, mentoring relationship quality can contribute to teachers' self-efficacy, and it is important for mentoring satisfaction. Also, as novice teachers responded to program features, they focused on their assigned mentors, who provided fundamental support. Any action for improvement should focus on how to shape and strengthen the connection and relationship between mentors and their mentees.

To enhance this relationship, it is critical to think about the core connection between the two individuals. Novice teachers need to feel that their mentors are there to help and support them to succeed. Mentors should be aware of the importance of being proactive to encourage novices to share their needs. In a good relationship, both individuals can share the needs and concerns with each other (Kram, 1985), which can contribute to the mutual benefits of this relationship. Also, a mentoring relationship should allow for more open communication by avoiding direct criticism because novice teachers seem to value positive encouragement, reflection, and advice if it is not directly associated with their performance.

Another possible suggestion here is to focus on building trust and maintaining confidentiality. With this in mind, a continued focus on ensuring this confidentiality is important to keep novice teachers comfortable and willing to interact positively. Ensuring mentoring confidentiality should strengthen mentor–mentee relationships and immerse

them in professional activities and learning tasks. The results of this study suggest that mentoring programs should establish a confidentiality procedure in which mentors are not involved in any type of evaluation or report about their mentees, which can increase novice teachers' confidence to ask questions, share their concerns, and seek solutions. Thus, mentoring programs should establish policies that protect novice teachers' confidentiality and require keeping shared issues private from others and administrators.

Second, mentor matches by school, content, and grade level seemed important. Mentor matches by school is related to the importance of frequent interaction and communication. Some novice teachers seemed to struggle with getting immediate support when they needed it. Also, mentor matches by content area can possibly strengthen novice teachers' depth of field. For example, when novice teachers are assigned to mentors from the same content and grade-level background, it enhances their connection and relationship because the mentors and novice teachers are able to share more common ideas in very specific ways. The study found that different specialization areas could hinder novice teachers from receiving appropriate assistance for their professional needs, especially when they needed specific support related to their teaching content. To help with that, more focus on mentors' selection criteria would help eliminate these issues. Figure 7 consists of ideas that can be used in selecting and matching mentors.

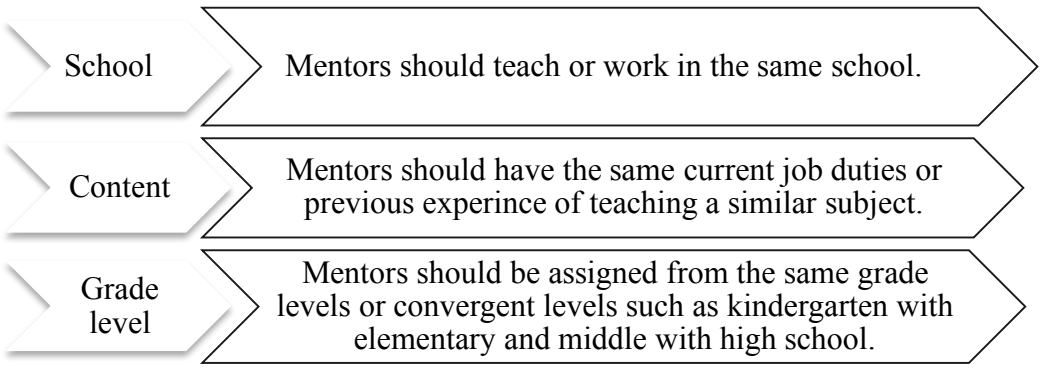

Figure 7. Mentor selection and matches model.

Third, school and working conditions, including various aspects in the teaching profession concerning students' diversity, school climate, school resources, parents' involvement, and workload should be considered. This could assist in exploring further ideas that help deal with the challenges novice teachers may encounter during the beginning of their careers. These challenging areas of working conditions seem to be inherent issues that teachers need to learn along with the skills to address them. For example, many classrooms in the United States are quite diverse, which requires teachers to be appropriately prepared (Banks et al., 2005). Therefore, teachers must have sophisticated skills to accommodate diverse learners. Without adequate preparation, and ongoing assistance, teachers could be too overwhelmed to deal effectively with issues arising in diverse classrooms (Zeichner, 1996).

Novice teachers and experienced teachers may continue to deal with the same challenging working conditions, but it is assumed that experienced teachers would have a deeper understanding of the problems and the skills required to address them. These challenges should provide educators and mentors a better idea of what novice teachers

may struggle with and how to incorporate these issues into mentoring practices and more professional training for both.

Fourth, mentors play a significant role in supporting novice teachers, which increases the importance of providing additional support and training for mentors to enhance their knowledge and productivity due to the potential demand placed on them. To ensure a strong mentoring program, assigned mentors are the key component of the process. As discussed earlier, novice teachers rely on their assigned mentors to seek help, advice, and assistance. For a well-constructed program, mentor training, selection, and matches need more attention to maximize novice teachers' support. Mentors should cultivate further understanding of how to help novice teachers and how to create mentoring goals to support novice teachers' progress in the beginning of their teaching career. Here are some suggested ideas that can help with training qualified mentors:

1. Learn listening and communication skills that can empower the mentoring relationship.
2. Learn how to teach novice teachers the components of a deepened reflective cycle. For example, mentors should not only think about their service as a means of answering questions, generating ideas, and providing instructions but also as a way of inspiring novice teachers to think, evaluate, and critically reflect on their experiences. This can help novices to perceive themselves as capable individuals who can lead in their field of interest and solve unexpected problems.
3. Stimulate awareness of how to be a role model for novice teachers and how to avoid negative attitudes toward the profession or school from transposing

these concerns to mentees. For instance, to promote a good attitude toward the profession, mentors should not frustrate novice teachers with negative comments about the profession or the education system. It is noteworthy that Rowley (1999) pointed out "good mentors share their own struggles and frustrations and how they overcome them. And always, they do so in a genuine and caring way that engenders trust" (p. 22).

Ideas for Creating a Mentoring Program in Saudi Arabia

My research interest is to examine specific mentoring elements and understand their influence on novice teachers' self-efficacy. This study explored aspects of a mentoring process that I hope will contribute to a program construction and implementation in Saudi Arabia. The process of supervision in Saudi Arabia is an evaluative system that aims to improve education through a hierarchical model. Supervision in Saudi Arabia is essentially a means of evaluating and monitoring the function of teaching practices. This does not provide specific support to enable novice and experienced teachers to express their essential needs by asking questions and seeking assistance; rather, it is an evaluation of a hypothetical practice that involves the mentors' vision of teaching. Initially, it is hoped that these supervising practices can improve teachers' performance in the classroom by providing functional evaluation to teachers. Abdulkareem (2001) defined a *supervisor* as "a mostly qualified person who is appointed by the Ministry of Education to inspect, supervise, and evaluate teachers and the instructional process on a regular basis" (p. 9).

To design a mentoring program for novice teachers, the current supervision procedure needs to be changed from being an evaluative program only, to include a more

supportive system that mainly focuses on improving novice teachers' skills and meeting their needs. The Supervision Department can create mentoring programs that focus on guiding novice teachers. These mentoring programs should be different from the current supervision process. For example, the supervision procedure in the current plan focuses on all teachers, including experienced and novice teachers. Supervision is important to enforce policies and maintain a scrutinizing approach to school functions. However, the recommendation to create a supportive system is to hire, train, and implement full-time mentors and experienced teachers to participate in mentoring novice teachers with a more mentoring-based relationship and no evaluation. This supportive mentoring program can help novice teachers immerse in the profession and encourage experienced teachers to participate in professional activities. A suggested model can be found in Figure 8.

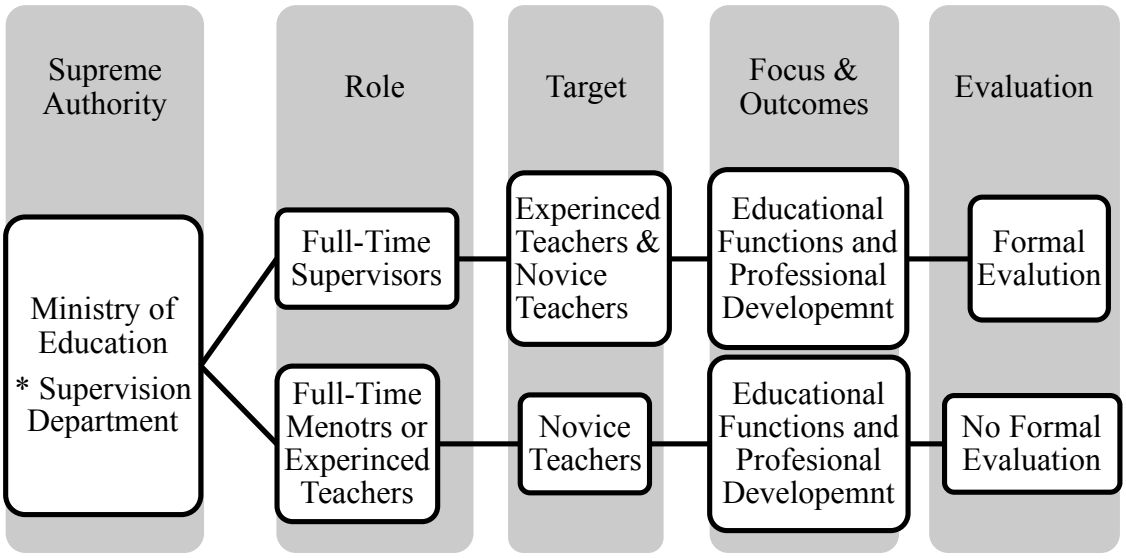

Figure 8. A recommended model to establish a support system for novice teachers in Saudi Arabia.

The idea here is to implement more mentoring based relationships that lead newly hired teachers to express their needs and seek support with no concerns of evaluation. A recent policy concerns the importance of retaining qualified teachers only, the Ministry of

Education has required novice teachers to be hired as non-tenured teachers for two years with no appeal to transfer from their schools during this period (Circulating to all Sectors of the Ministry and the Departments of Education, 2014). This process can increase the need for more supportive system to those teachers to help them thrive and hone their skills.

As I discussed earlier, with the growing discussion in Saudi Arabia about teachers' effectiveness, there is still no specific mentoring program that can direct novice teachers' efforts to increase their effectiveness. Minister of Education, Ahmed Aleissa, mentioned in a recent address that the current education system relies on teacher-based learning, which impairs students from being active learners (Ministry of Education, 2016). Teachers need to improve their teaching practices and involve students in more interactive learning processes. Aleissa emphasized that the advent of Saudi Vision 2030 coincides with the growth of the worldwide movement that requires more demand on education for more competitive growth (Ministry of Education, 2016).

Also, on October 5, 2016, Director of Educational Supervision Nehaia Alkhunein addressed the importance of teachers' development to equip them with adequate skills that can enhance educational outcomes in the Kingdom. She referred to the new initiatives and efforts that the ministry put forth to fulfill the intended goals of Saudi Vision 2030. These initiatives are "the development of national strategy to upgrade the teaching profession by raising the professional level of teachers and the level of services provided to them and the development of the system surrounding the profession" (Ministry of Education, 2016). With this significant attention to improving educational

outcomes in Saudi Arabia, there is still a need to focus on distinct mentoring programs that provide support and more professional activities to enhance teachers' performance.

For a more concise vision for future improvement, reconstructing the current supervision process is crucial. There is a need to establish a new mentoring program that separates mentors from evaluators. With the demands from Saudi Vision 2030, education has become the heart of the transition process to prepare the next generation of skillful students. Teachers have become more responsible for demonstrating educational content in more effective ways and inspiring students to involve themselves in more critical thinking skills and problem solving. As Minister of Education Aleissa emphasized,

> the ministry of education is working to increase its efforts to improve curriculum and educational activities in ways that increase students' engagement in the learning process and reduce [traditional teaching practices such as] memorization and transform [them] to active learning to hone the skills of critical thinking, inquiry, and exploration and transform the focus from teacher-centered to student-centered learning. (Ministry of Education, 2016)

This has led the Ministry of Education to establish foreign and domestic teacher-training plans that focus on teachers' skills (Ministry of Education).

However, this requires more attention on teachers' preparation, training, and support to enhance their teaching skills. Any potential effort should focus on how to shape newly hired teachers in ways that enhance their teaching performance and outcomes. To further implement a concise mentoring agenda, this study provides distinct key elements to establish a mentoring program that focuses on teachers' needs by promoting a good mentoring relationship, focusing on teachers' performance while

ensuring mentoring confidentiality, and separating mentoring from evaluation, so teachers can feel free to ask questions and seek assistance as needed.

Abdulkareem (2001) found that supervisors perceive the role of supervision differently from teachers, which increases the issue of *incongruence*, meaning teachers may have less belief in the importance of supervision than their supervisors. Abdulkareem identified three areas that can plague supervision practices: "ineffective communication strategies, unclear goals, and lack of teachers' participation" (p. 111). Steps toward incorporating mentoring programs can further assist experienced teachers to mentor novice teachers. This requires professional development and the recognition of effective teaching practices. More relationship-based mentoring between experienced teachers and novice teachers will increase the mutual benefits for both.

Abdulkareem suggested that teachers' participation in the supervisory process can increase their interaction in and positive attitude toward the supervision process. However, this requires a shift in the focus from supervising-based only to mentoring-based interaction in which the mentor provides supportive assistance to help novice teachers immerse in the new environment and develop teaching skills. As discussed earlier, the establishment of mentoring support can help improve the current supervisory practices in Saudi Arabia. Novice teachers should have a different support system that aims to help them with their needs and enhance their skills. It is hoped that mentoring support would provide a more comfortable relationship. This can also reinforce the relationship trust and openness (Martin, 2013). The support should include emotional, social, and professional aspects.

Preparing teachers with necessary teaching skills requires more focus on articulating mentoring aims and objectives in ways that can hone novice teachers' professional skills, such as classroom management, instructional practices, student engagement, and communication. To instill these skills in novice teachers, more focus is needed on how to continue to provide quality support to them. A huge focus should also be given to building novice teachers' confidence and self-efficacy, which are fundamental elements of teachers' ability to perform well. Uniquely, self-efficacy can serve as a mediator for other outcomes, such as classroom practices and teacher retention, and a significant focus on mentoring's influence on self-efficacy can further help educators conceptualize its effectiveness. Because of the formative and transformative nature in the beginning of teachers' careers (Feiman-Nemser, 2001), self-efficacy is a fundamental mechanism that can direct beginning teachers' endeavors to build their teaching skills. Bandura (1997) emphasized that the absence of self-efficacy can inhibit individuals from pursuing their objectives.

Early support for newly hired teachers would bridge the gap between the most theoretical-based preparation and actual experience, whereby novice teachers can build and construct their teaching efficacy and grow their professional identity. Because the teaching profession has complex and various duties and requirements, novice teachers require significant attention to help them navigate unexpected obstacles they may encounter when they become responsible for their classrooms and students' learning (Feiman-Nemser, 2003). The extent of their abilities to perform in schools creates their personal perception of self-efficacy, and additional support can possibly help them avoid negative accumulation of low self-efficacy that can hinder their future performance.

The results of this study show the importance of preparing and recruiting skillful mentors to guide mentoring implementations, as most of the participants linked their success and growth to their assigned mentors. Thus, the strength of mentoring programs seems directly connected to effective mentors who can provide powerful guidance to novice teachers.

Further Consideration

With significant benefits being associated with mentoring programs, it is noteworthy that the establishment of a mentoring program in Saudi Arabia may create some challenges. There are three main ideas that need further consideration.

The first idea is to focus on how to construct a new mentoring program. This would include goals and objectives, mentor training, funding processes, and standards. This requires a close exploration of novice teachers' needs and challenges of working practices in schools and building appropriate mentoring objectives. These objectives can help direct mentoring efforts in ways that help novice teachers deal with the challenges they may encounter in their schools. At the outset, an overall assessment of novice teachers' needs and challenges would allow for more rigorous understanding of their working conditions and provide ideas into the elements of constructing a supportive program. These elements would include mentoring objectives and mentor training components.

The second idea is related to establishing a mentoring culture. Teachers in Saudi Arabia have become familiar with the supervision process in which the supervisor seems to have a more authoritative power to visit and evaluate teachers. Creating a mentoring culture that allows for an experienced teacher to work closely with a novice teacher could

be difficult in the beginning. However, to solve this issue, the Supervision Department should provide mentoring privileges to encourage novice teachers' participation and spread mentoring culture. These privileges may include a reduction of novice teachers' workload and establishing a teaching license that requires mentoring participation.

The third idea is to examine mentoring effectiveness in Saudi Arabia. How would this type of support of novice teachers work in the country? This process may require the Supervision Department to start with conducting and implementing a pilot mentoring program in a particular district with a comprehensive evaluation of both mentors and novice teachers' perceptions and experience to involve in this process. This evaluation would hopefully allow policymakers and educators to discover both novice teachers and mentors' learning development, satisfaction, teaching efficacy, and barriers that may prevent or impair mentoring benefits. This step can provide informative evaluation on how mentoring can or cannot be implemented in Saudi Arabia and allow for further understanding of novice teachers attitude towards mentoring and supervision in the Kingdom. It is my hope that these steps would contribute to help the Ministry of Education and Supervision Department decide on the possible implementation of this type of supporting system.

Limitations

Even though the study controlled for some confounding variables, such as gender, community demographics, and mentor matches, to explore the influence of mentoring relationship quality and mentoring satisfaction on novice teachers' self-efficacy, self-efficacy is still under the influence of other resources that can contribute to its construct

(Knobloch & Whittington, 2002). Exploring school contexts' influence can further illustrate possible influences on the construct of novice teachers' self-efficacy.

Because the study used a self-report to assess teachers' feelings and perceptions on their mentoring relationship, satisfactions, and self-efficacy, the accuracy of evaluating teachers' perceptions can fluctuate based on participants' psychological states. However, the administration of the survey occurred at the end of the school year with the hope that participants will have had a big picture of their mentoring program and teaching efficacy. Possibly, a similar study could pursue pre- and post-examinations of participants' attitudes toward their mentoring programs and self-efficacy.

Another limitation is related to participants' being recruited from a single mentoring program. There are many different mentoring programs across the United States, and they vary from state to state or even one district to another. It is helpful to examine novice teachers' self-efficacy in different programs and school contexts. Mentoring programs across the United States experience different implementations, emphasis, and policies, which could create possible variations on mentor-mentee relationships.

A final limitation concerns the qualitative methodology used to collect the study data. The qualitative phase depended on the narrative responses that novice teachers were willing to provide. Even though this method allowed for collecting various responses, a need for more traditional methods of collecting the data, such as interviews or observations, still exists. For example, in-depth interviews enable the interviewer to explore and perceive "the lived experience of other people and the meaning they make of that experience" (Seidman, 2006, p. 9). Thus, conducting a purposeful and efficacious

interview by probing and follow up with further explanations and illustrations from participants can enhance the study findings.

Final Thoughts

This study examined mentoring relationship quality, satisfaction, and mentor matches on novice teachers' self-efficacy. Well-established mentoring relationships positively influence mentoring satisfaction and novice teachers' self-efficacy. Even though mentor matches did not show significant differences on the investigated variables, the study still supports assigning novice teachers to mentors from the same school, content areas, and grade level with more focus on teaching the same content areas. This would help to focus the discussion and share more common ideas about the subject, including planning processes, instructional designs, and problem solution strategies. It is very important to establish a secure communication and ensure novice teachers confidentiality. This can enhance the mentoring outcomes by encouraging novice teachers to be more open to reflective practices and be proactive in pursuing support as needed.

Even though this study found a connection between the mentoring relationship quality and novice teachers' self-efficacy, a considerable focus is needed to explore how to strengthen this relationship. In general, a good relationship should enable reciprocal benefits, enjoyment, frequent interaction, and provide various kinds of support. A possible follow-up exploration could examine the elements of mentoring relationship quality and specific details on what mentoring factors can contribute to novice teachers' self-efficacy. This lead to a focus on how mentors can utilize their mentoring relationship to enhance novices' self-efficacy. Much of the research on mentoring quality focused

only on the relationship quality, but a qualitative exploration could provide significant insights into the elements of mentoring relationship quality that can contribute to mentoring outcomes to ensure that novice teachers receive significant assistance as they begin their teaching career.

APPENDICES

APPEDIX A

THE IRB APPROVAL

UNIVERSITY OF NORTH DAKOTA

DIVISION OF RESEARCH & ECONOMIC DEVELOPMENT

UND.edu

Institutional Review Board
Twamley Hall, Room 106
264 Centennial Dr Stop 7134
Grand Forks, ND 58202-7134
Phone: 701.777.4279
Fax: 701.777.6708

April 1, 2016

Principal Investigator(s):	Matar Alessa
Project Title:	The Influence of Mentoring Quality and Satisfaction on Novice Teachers' Self-Efficacy
IRB Project Number:	IRB-201604-352
Project Review Level:	Exempt 2
Date of IRB Approval:	04/01/2016
Expiration Date of This Approval:	03/31/2019

The application form and all included documentation for the above-referenced project have been reviewed and approved via the procedures of the University of North Dakota Institutional Review Board.

If you need to make changes to your research, you must submit a Protocol Change Request Form to the IRB for approval. No changes to approved research may take place without prior IRB approval.

This project has been approved for 3 years, as permitted by UND IRB policies for exempt research. You have approval for this project through the above-listed expiration date. When this research is completed, please submit a Termination Form to the IRB.

The forms to assist you in filing your project termination, adverse event/unanticipated problem, protocol change, etc. may be accessed on the IRB website: http://und.edu/research/resources/human-subjects/

Sincerely,

Michelle L. Bowles, M.P.A., CIP
IRB Coordinator

MLB/sb

Cc: Jodi Bergland Holen, Ph.D.

APPENDIX B

THE SURVEY CONSENT

INTRODUCTION

You are invited to participate in this online survey on the relationship that mentoring programs can have on new teachers' satisfaction and self-efficacy that is defined as an individual's belief in his/her ability to perform a particular task (Bandura, 1997). This is a research project being conducted by Matar Alessa, a doctoral student at the University of North Dakota. It should take approximately ten minutes to complete.

PARTICIPATION

Participation is voluntary, and you may stop at any time without penalty or risk to your status.

CONFIDENTIALITY

Your responses to this survey will be sent to an online link at Qualtrics, an online survey tool at the University of North Dakota, where data will be stored in a password protected electronic format. Qualtrics does not collect identifying information such as your name, email address, or IP address. Therefore, your responses will remain anonymous.

RISKS

There are no foreseeable risks in this study.

BENEFITS

There are no direct benefits for participants. However, it is hoped that your responses will help the researcher learn more about your opinions and how new teachers can be supported.

ELECTRONIC CONSENT

Please note that your submission of this survey is a consent that your responses will be compiled with others and is a subject of this project.

CONTACT

I appreciate your participation in this survey to assist me in gathering information to conduct my study. If you have questions about the study or the procedures, you may contact me via 720 427 7067 or via email: matar.alessa@und.edu, or you may contact my research supervisor, Dr. Jodi Bergland Holen via 701 777 6705 or via email: jodi.holen@und.edu

If you have questions regarding your rights as a research subject, you may contact The University of North Dakota Institutional Review Board at (701) 777-4279. You may also call this number with problems, complaints, or concerns about the research. Please call this number if you cannot reach research staff, or you wish to talk with someone who is an informed individual who is independent of the research team. General information about being a research subject can be found on the Institutional Review Board website "Information for Research Participants" http://und.edu/research/resources/human-subjects/research-participants.cfm

Best Regards,

Matar Alessa

University of North Dakota

APPENDIX C

THE SURVEY

1. What is your age in years?
2. Your gender
    - Male
    - Female
    - Other
        - Choose not to identify
3. Teaching Assignment (You Can Choose More Than One)
    - Kindergarten
    - Elementary
    - Middle School
    - High School
4. Is this your first-year of teaching experience?
    - Yes
    - No

5. Community demographics by population
    - Less than 500
    - 501 - 5,000
    - 5001 - 10,000
    - more than 10,000
6. Does your mentor work in the same school?
    - Yes
    - No
7. Does your mentor teach any of the same content areas?
    - Yes
    - No
8. Does your mentor teach the same grade level(s)?
    - Yes
    - No

……

Listed below are statements that are related to mentorship quality. Please rate the statements below as they relate to you.

Strongly Disagree 1 Disagree 2 Neutral 3 Agree 4 Strongly Agree 5

1. My mentor and/or I have benefited from our relationship
2. I have effectively used my mentoring program
3. I have enjoyed a high quality mentoring relationship
4. My mentor and I have frequent meetings and interactions (about once a week)
5. I feel my teaching skills have improved because of the mentoring program

……

Listed below are statements that are related to mentorship satisfaction. Please rate the statements below as they relate to you.

Strongly Disagree 1 Disagree 2 Neutral 3 Agree 4 Strongly Agree 5

1. I am/have been satisfied with my mentoring.
2. Mentoring has disappointed me
3. Mentoring has failed to meet my needs.
4. My mentor took a personal interest in my career.
5. I believe that my mentor was an eager and willing participant in the mentoring program.
6. My mentor is a role model to me.
7. I am satisfied with the mentor that I was assigned.
8. My mentor and I discussed career goals often.
9. I was able to schedule meetings with my mentor during work hours.
10. My mentor understood my teaching context
11. My mentor's personality matched well with mine

……

Listed below are statements that are related to teacher's self-efficacy. Please rate the statements below as they relate to you.

Not at all True 1 Barely True 2 Moderately True 3 Very True 4

1. I am confident that I am able to successfully teach all relevant subject content to even the most difficult students.
2. I believe that I can maintain a positive relationship with parents even when tensions arise.

3. I believe, as time goes by, I will continue to become more and more capable of helping to address my students' needs.
4. Even if I get disrupted while teaching, I am confident that I can maintain my composure and continue to teach well.
5. I am confident in my ability to be responsive to my students' needs even if I am having a bad day.
6. I believe that I can exert a positive influence on both the personal and academic development of my students.
7. I am confident that I can develop creative ways to cope with system constraints (such as budget cuts and other administrative problems) and continue to teach well.
8. I believe that I can motivate my students to participate in innovative projects.
9. I believe that I can carry out innovative projects even when skeptical colleagues oppose me.

……

12. Please describe the most valuable features of the mentoring program. Why?
13. Overall, does your mentoring program meet your needs as a growing professional? Why or Why not?
14. At your site, what are the most challenging working conditions? please be specific.

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